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ABSTRACT

The data presented in this report show trends in doctorate awards by science and engineering fields and recipient characteristics, institutions awarding doctorates, and postgraduation plans of recipients for the years 1987-1996. The source of the data is the Survey of Earned Doctorates (SED). The SED is conducted annually for the National Research Council (NRC). Data for the SED are collected from the individual doctorate recipients. The questionnaire is distributed through the cooperation of the Graduate Deans to persons as they are completing their doctorate. Tables present detailed data on science and engineering doctorate recipients with some totals providing for broad nonscience and engineering fields. Graduate schools in the United States have conferred increasing numbers of doctorates in science and engineering (S&E) fields in the last 20 years. Much of this growth is due to increasing numbers of foreign citizens on temporary visas who come to the United States to earn doctorates in S&E. In 1977, they earned 18 percent of all S&E doctorates and by 1996, they accounted for 30 percent. However, there have also been increases in U.S. citizens and immigrants holding permanent residence visas earning S&E doctorates. Increases among this group have been due to growing numbers of women and racial/ethnic minorities, mostly Asian-Americans. However, the number of Blacks, Hispanics, and American Indians awarded S&E doctorates also increased in the last 20 years, especially in the 5-year period from 1992-96. Even with these increases, Blacks, Hispanics, and American Indians remain severely underrepresented among S&E doctorates recipients. (ASK)

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Science and Engineering Doctorate Awards: 1996

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Detailed Statistical Tables

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Division of Science Resources Studies
Directorate for Social, Behavioral and Economic Sciences

National Science Foundation

NSF 97-329

Science and Engineering Doctorate Awards: 1996

Detailed Statistical Tables

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Division of Science Resources Studies
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Contributors

Tabulations were prepared by Quantum Research Corp. for the National Research Council, under a contract for the National Science Foundation. The project manager for this report was Susan T. Hill.

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General Notes

The data presented in this report show trends in doctorate awards by science and engineering (S&E) field and recipient characteristics, institutions awarding doctorates, and postgraduation plans of recipients. The source of the data is the Survey of Earned Doctorates (SED).

The SED has been conducted annually for the National Science Foundation (NSF) and four other Federal agencies by the National Research Council. Information from this survey becomes part of the Doctorate Records File, which is a census of recipients of research doctorates awarded since 1920 by regionally-accredited universities and colleges. Doctoral degrees such as the Ph.D. or D. Sc. are included in these surveys, but first-professional degrees such as the J.D. or M.D. are not.

Data for the SED are collected directly from the individual doctorate recipients. The questionnaire is distributed to them through the cooperation of the Graduate Deans to persons as they are completing their doctorate. The data for a given year include all doctorates awarded in the 12-month period ending on June 30 of that year.

These tables present detailed data on (S&E) doctorates recipients, with some totals provided for broad non-S&E fields. Detailed data on non-S&E fields are published by the National Research Council and by other Federal sponsors of the Survey of Earned Doctorates. The groupings of field specialties into broad fields may differ among the sponsoring agencies according to their missions.

Approximately 93 percent of the annual cohort of doctorate recipients in 1996 responded to the questionnaire. Over the decade, though, the response rate ranged from 95 percent in 1987, then declined to 91 percent in 1989, then increased to 93 percent in 1996. Note that most of the numbers presented are actual self-reports, as there are no adjustments for nonresponse. For the nonrespondents, partial data from public sources are added to the file for nonrespondents; therefore, complete counts are presented for conferred doctorates by field of study and sex of recipient. Although some tables present data subject to nonresponse, the estimates represent the conservative known estimate for any data item. Therefore, small changes in numbers should be interpreted with caution, as numerical trends are affected by fluctuations in response rates and declines and increases may appear greater than they may be in reality.

For further information on the survey methodology or the availability of data for S&E doctorate recipients, please contact—

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Doctorates Earned in Science and Engineering Fields by Racial/Ethnic Minorities

Graduate schools in the United States have conferred increasing numbers of doctorates in science and engineering (S&E) fields in the last 20 years. Much of this growth is due to increasing numbers of foreign citizens on temporary visas who come to the United States to earn doctorates in S&E. In 1977, they earned 18 percent of all S&E doctorates and by 1996, they accounted for 30 percent. However, there have also been increases in U.S. citizens and immigrants holding permanent residence visas earning S&E doctorates. Increases among this group have been due to growing numbers of women[1] and racial/ethnic minorities, mostly Asian-Americans.

However, the number of blacks, Hispanics, and American Indians awarded S&E doctorates also increased in the last 20 years, especially in the 5-year period from 1992-96 (Table A). Even with these increases, Blacks, Hispanics, and American Indians remain severely underrepresented among S&E doctorates recipients where they comprised less than 8 percent of the total, compared with 13 percent of S&E bachelor's degrees recipients, for example.[2]

Table B provides the doctoral award data for these groups in broad fields within science and engineering and non-S&E for 5-year periods from 1977-96.

Table A. Science and engineering doctorates awarded to U.S. citizens and non-U.S. citizens on permanent visas, by race ethnicity of recipients: 1987-91 and 1992-96

Race/ethnicity	1987-91		1992-96	
	Number	Percent	Number	Percent
Total	74,423	100.0	88,326	100.0
Whites	63,501	85.3	68,853	78.0
Asians*	5,016	6.7	12,706	14.4
Hispanics	2,096	2.8	2,797	3.2
Blacks	1,885	2.5	2,513	2.8
American Indians	249	0.3	341	0.4
Unknown	1,676	2.3	1,116	1.3

* Chinese students who became permanent residents accounted for much of this increase, numbering 238 in 1987-91 and 5,953 in 1992-96.

NOTE: Percents may not add to total due to rounding.

SOURCE: National Science Foundation/SRS, Survey of Earned Doctorates.

[1] For data on women earning S&E doctorates, see Tables 2, 3, 8 and 9.

[2] See NSF/SRS, *Science and Engineering Degrees, by Race/Ethnicity of Recipients: 1989-95 (forthcoming) and 1977-91 (NSF 94-306)*.

Table B. Science and engineering (S&E) doctorates awarded, by citizenship status, racial/ethnic group, and major field of study of recipients: 1977-96

5-year period	All Fields	Science and engineering (S&E)				Non-S&E				
		Total	Natural sciences 1/	Behavioral sciences 1/	Engineering	Total	Health	Education	Humanities 2/	Professional/ other
	Total									
Total doctorates:										
1977-81	156,206	89,565	43,777	33,214	12,574	66,641	2,834	37,117	18,978	7,712
1982-86	156,928	94,030	46,690	32,458	14,882	62,898	3,546	34,615	15,966	8,771
1987-91	173,798	109,449	54,301	32,598	22,550	64,349	4,653	32,061	16,941	10,694
1992-96	203,883	130,088	64,678	36,139	29,271	73,795	6,259	33,495	21,905	12,136
	U.S. citizens and Non-U.S. citizens with permanent visas									
All races:										
1977-81	133,759	73,374	36,454	28,893	8,027	60,385	2,488	33,786	17,548	6,563
1982-86	125,721	71,232	36,557	26,895	7,780	54,489	2,922	30,569	14,095	6,903
1987-91	128,534	74,423	37,796	25,519	11,108	54,111	3,689	28,127	14,423	7,872
1992-96	151,157	88,326	44,507	28,824	14,995	62,831	4,905	30,105	18,818	9,003
American Indians/ Alaskan Natives:										
1977-81	367	137	54	70	13	230	7	180	34	9
1982-86	428	194	93	87	14	234	14	173	26	21
1987-91	532	249	114	107	28	283	17	195	37	34
1992-96	748	341	143	155	43	407	30	239	84	54
Asians/Pacific Islanders:										
1977-81	5,219	4,159	2,090	679	1,390	1,060	142	453	256	209
1982-86	5,200	3,951	2,000	663	1,288	1,249	166	518	234	331
1987-91	6,508	5,016	2,428	804	1,784	1,492	170	561	339	422
1992-96	15,333	12,706	7,284	1,649	3,773	2,627	374	823	742	688
Blacks:										
1977-81	5,821	1,717	497	1,135	85	3,904	96	3,059	467	282
1982-86	5,204	1,782	502	1,158	122	3,422	107	2,612	392	311
1987-91	5,059	1,885	573	1,128	184	3,174	164	2,234	384	392
1992-96	6,609	2,513	834	1,381	298	4,096	252	2,817	527	500
Hispanics:										
1977-81	2,608	1,127	432	571	124	1,481	27	793	561	100
1982-86	3,143	1,497	573	768	156	1,646	56	926	539	125
1987-91	3,799	2,096	922	916	258	1,703	68	909	579	147
1992-96	5,078	2,797	1,261	1,158	378	2,281	130	1,152	769	230
Whites:										
1977-81	113,324	62,302	31,268	25,043	5,991	51,022	2,097	27,961	15,337	5,627
1982-86	108,815	61,906	32,393	23,586	5,927	46,909	2,520	25,852	12,557	5,980
1987-91	110,215	63,501	32,881	22,104	8,516	46,714	3,225	23,911	12,820	6,758
1992-96	121,675	68,853	34,413	24,165	10,275	52,822	4,059	24,853	16,470	7,440
Unknown race:										
1977-81	6,620	3,932	2,113	1,395	424	2,688	119	1,340	893	336
1982-86	2,931	1,902	996	633	273	1,029	59	488	347	135
1987-91	2,421	1,676	878	460	338	745	45	317	264	119
1992-96	1,714	1,116	572	316	228	598	60	221	226	91

See explanatory information, if any, and SOURCE at end of table.

Table B. Science and engineering (S&E) doctorates awarded, by citizenship status, racial/ethnic group, and major field of study of recipients: 1977-96

5-year period	All Fields	Science and engineering (S&E)				Non-S&E				
		Total	Natural sciences 1/	Behavioral sciences 1/	Engineering	Total	Health	Education	Humanities 2/	Professional/ other
	Non-U.S. citizens with temporary visas									
1977-81	18,040	13,672	6,325	3,192	4,155	4,368	263	2,313	828	964
1982-86	24,037	18,494	8,475	3,759	6,260	5,543	433	2,708	1,036	1,366
1987-91	35,859	29,007	14,047	4,857	10,103	6,852	685	2,358	1,623	2,186
1992-96	47,711	38,522	18,842	6,260	13,420	9,189	1,182	2,615	2,560	2,832
	Unknown citizenship									
1977-81	4,407	2,519	998	1,129	392	1,888	83	1,018	602	185
1982-86	7,170	4,304	1,658	1,804	842	2,866	191	1,338	835	502
1987-91	9,405	6,019	2,458	2,222	1,339	3,386	279	1,576	895	636
1992-96	5,015	3,240	1,329	1,055	856	1,775	172	775	527	301

1/ Natural sciences are the physical, earth/atmospheric/oceanographic, mathematics, computer, biological, and agricultural sciences. Behavioral sciences are the social sciences and psychology.

2/ Categories differ from those published by other Federal sponsors and the National Research Council in that linguistics, history of science, American studies, and archaeology are included not in humanities but in social science.

SOURCE: National Science Foundation/SRS, Survey of Earned Doctorates.

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Table 1. Science and engineering (S&E) doctorates awarded, by field of study and year of doctorate: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
S&E, total	19,894	20,932	21,732	22,868	24,023	24,675	25,443	26,205	26,535	27,230
Engineering, total	3,712	4,187	4,543	4,894	5,214	5,438	5,698	5,822	6,008	6,305
Aeronautical/astronautical engineering	142	150	178	192	207	234	228	230	252	287
Chemical engineering, total	584	685	712	658	691	725	737	725	708	798
Chemical	527	624	625	561	621	607	624	630	602	681
Petroleum	23	33	29	49	28	54	52	42	48	52
Polymer/plastics [1]	34	28	58	48	42	64	61	53	58	65
Civil engineering, total	477	531	538	553	575	594	624	684	656	697
Civil	441	488	498	505	509	540	563	602	572	599
Environmental health	36	43	40	48	66	54	61	82	84	98
Electrical engineering, total	779	1,010	1,137	1,276	1,405	1,483	1,543	1,673	1,731	1,740
Communications	26	24	25	35	21	30	22	33	29	32
Computer	62	100	117	131	178	175	167	202	189	208
Electrical/electronics	691	886	995	1,110	1,206	1,278	1,354	1,438	1,513	1,500
Industrial/manufacturing engineering [2]	120	127	162	151	165	196	236	228	284	258
Materials/metallurgical engineering, total	392	374	380	440	489	485	535	539	588	572
Ceramic sciences [3]	42	30	35	43	58	42	42	39	39	41
Materials science	238	252	257	307	361	365	416	433	476	470
Metallurgical	112	92	88	90	70	78	77	67	73	61
Mechanical engineering, total	657	715	760	884	875	987	1,030	1,015	1,025	1,052
Mechanical	544	610	650	773	762	855	902	883	917	947
Engineering mechanics	113	105	110	111	113	132	128	132	108	105
Other engineering, total	561	595	676	740	807	734	765	728	764	901
Agricultural	74	70	102	101	83	84	86	89	73	104
Bioengineering/biomedical	75	114	115	129	149	147	171	173	189	220
Engineering physics	13	9	16	16	23	25	21	17	17	37
Engineering science	26	32	27	37	42	51	55	46	56	52
Mining/mineral	27	17	33	39	38	26	24	23	19	31
Naval architecture/marine [4]	7	9	9	8	5	N/A	N/A	N/A	N/A	N/A
Nuclear	84	104	86	114	107	120	108	85	105	113
Ocean	24	21	20	17	21	21	24	29	21	26
Operations research	51	44	68	46	76	56	56	47	48	74
Systems	47	44	30	51	48	37	57	51	47	47
Engineering, general	54	49	61	75	78	64	47	39	60	60
Engineering, other	79	82	109	107	137	103	116	129	129	137
Sciences, total	16,182	16,745	17,189	17,974	18,809	19,237	19,745	20,383	20,527	20,925
Physical sciences, total	3,238	3,350	3,261	3,524	3,626	3,781	3,699	3,977	3,841	3,838
Astronomy, total	100	130	113	128	125	134	145	144	173	192
Astronomy	46	66	49	52	50	55	76	66	89	84
Astrophysics	54	64	64	76	75	79	69	78	84	108
Chemistry, total	1,975	2,015	1,970	2,100	2,194	2,214	2,137	2,257	2,162	2,148
Analytical	314	301	289	293	304	304	286	334	317	346
Inorganic	240	250	256	242	260	268	237	262	258	249
Medicinal/pharmaceutical [5]	65	73	64	48	83	69	99	102	96	96
Nuclear	13	7	6	13	14	7	8	10	5	5
Organic	511	531	511	452	538	512	518	544	483	506
Physical	302	318	310	325	364	398	336	334	338	300
Polymer	96	81	78	81	111	83	107	117	116	121
Theoretical	46	50	46	55	45	59	53	52	40	57
Chemistry, general	297	310	312	524	400	449	431	447	458	396
Chemistry, other	91	94	98	67	75	65	62	55	51	72

See explanatory information, if any, and SOURCE at end of table

Table 1. Science and engineering (S&E) doctorates awarded, by field of study and year of doctorate: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Physics, total	1,137	1,172	1,161	1,265	1,286	1,403	1,399	1,548	1,479	1,485
Acoustics	17	16	15	21	13	18	27	20	18	19
Chemical & atomic/molecular[6]	79	77	74	87	76	85	95	140	110	129
Electron[4]	6	2	4	2	1	N/A	N/A	N/A	N/A	N/A
Elementary particle	159	174	135	163	182	153	170	176	183	175
Fluids	21	17	14	17	14	17	19	12	18	21
Nuclear	74	88	81	73	66	86	82	90	91	87
Optics	50	65	78	76	85	94	96	104	98	129
Plasma & high-temperature[7]	72	65	61	42	58	65	62	79	46	48
Polymer	15	20	7	11	17	17	29	29	23	33
Solid state & low-temperature[8]	287	252	296	306	372	408	336	388	371	364
Physics, general	238	271	269	323	247	297	340	343	355	324
Physics, other	119	125	127	144	155	163	143	167	166	156
Other physical sciences	26	33	17	31	21	30	18	28	27	13
Earth, atmospheric, and ocean sciences, total	602	695	723	738	815	794	771	824	780	794
Atmospheric sciences, total	87	103	87	83	108	120	99	129	130	125
Atmospheric dynamics	17	25	16	20	21	23	23	27	16	21
Atmospheric physics/chemistry	24	19	15	18	20	36	13	27	27	22
Meteorology	17	35	27	20	31	28	34	32	25	35
Atmospheric science/meteorology, general	16	14	14	23	26	27	22	37	44	33
Atmospheric science/meteorology, other	13	10	15	2	10	6	7	6	18	14
Geosciences, total	375	425	455	477	560	503	479	509	454	452
Applied geology[4]	5	7	6	6	1	N/A	N/A	N/A	N/A	N/A
Geology	114	144	165	166	192	166	197	194	186	162
Geochemistry	31	46	39	56	64	62	50	59	42	49
Geomorphology/glacial geology	18	9	10	14	18	12	16	13	11	11
Geophysics/seismology	75	83	87	91	117	108	101	106	93	101
Hydrology/water resources	18	24	24	13	16	29	25	30	24	31
Mineralogy/petrology	24	19	36	26	36	29	9	21	19	23
Paleontology	21	24	17	21	24	25	21	17	20	14
Stratigraphy/sedimentation	22	30	24	25	29	23	28	27	16	12
Geological & related sciences, general	18	8	19	31	30	18	15	18	21	27
Geological & related sciences, other	29	31	28	28	33	31	17	24	22	22
Oceanography, total	111	109	113	128	112	114	125	125	115	134
Marine sciences	38	28	26	39	27	32	27	34	32	27
Oceanography	73	81	87	89	85	82	98	91	83	107
Other environmental sciences	29	58	68	50	35	57	68	61	81	83
Mathematical/computer sciences, total	1,190	1,264	1,471	1,597	1,839	1,927	2,026	2,021	2,187	2,043
Mathematics, total	740	749	859	892	1,039	1,058	1,146	1,118	1,190	1,122
Algebra	57	54	50	39	72	69	84	78	82	78
Analysis/functional analysis	86	76	103	90	132	105	105	107	99	100
Applied mathematics	131	142	158	185	193	213	188	206	211	230
Computing theory	14	12	12	12	19	12	18	16	14	18
Geometry	30	44	47	42	66	45	44	35	45	72
Logic	18	20	12	19	23	28	19	29	35	16
Mathematical statistics[9]	143	152	167	157	206	217	228	205	205	178
Number theory	15	26	23	26	30	25	42	37	35	42
Operations research	22	29	22	29	16	22	37	26	36	21
Topology	41	27	37	50	57	58	54	38	51	55
Mathematics, general	137	134	177	191	180	209	276	269	305	233
Mathematics, other	46	33	51	52	45	55	51	72	72	79
Computer sciences, total	450	515	612	705	800	869	880	903	997	921
Computer science	384	442	519	612	720	791	825	833	913	837
Information science/systems	66	73	93	93	80	78	55	70	84	84

See explanatory information, if any, and SOURCE at end of table

Table 1. Science and engineering (S&E) doctorates awarded, by field of study and year of doctorate: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Biological/agricultural sciences, total	4,815	5,126	5,202	5,502	5,723	5,862	6,060	6,281	6,412	6,760
Biological sciences, total	3,839	4,111	4,116	4,328	4,650	4,799	5,092	5,203	5,376	5,723
Bacteriology	13	7	11	15	11	13	14	18	13	16
Biochemistry	573	612	669	678	765	715	846	804	824	794
Biomedical sciences[10]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	93	140
Biophysics	86	97	87	103	100	125	103	123	155	142
Biotechnology research[11]	N/A	N/A	N/A	N/A	N/A	N/A	8	14	4	6
Plant genetics	26	26	18	31	23	33	41	30	35	41
Plant pathology	33	30	22	37	50	32	41	40	32	38
Plant physiology	62	74	47	51	65	68	48	70	55	73
Botany, other	106	112	117	104	105	107	105	117	102	105
Anatomy	92	88	80	70	77	75	76	66	64	47
Biometrics/biostatistics	37	47	46	47	59	63	74	72	67	81
Cell biology	127	118	133	145	149	188	231	237	236	233
Developmental biology/ embryology[12]	6	7	10	22	37	48	57	62	64	96
Ecology	158	155	161	166	189	180	177	201	203	245
Endocrinology	19	21	21	24	33	27	16	26	20	24
Entomology	123	133	139	147	138	139	114	123	121	136
Biological immunology[13]	136	179	152	153	177	181	169	161	190	238
Microbiology	301	333	340	335	372	377	433	423	426	444
Molecular biology	303	364	413	413	481	527	582	598	617	651
Neuroscience	153	163	181	192	238	238	276	284	309	404
Nutritional sciences	141	127	128	118	106	132	134	147	136	142
Parasitology	16	20	20	13	20	17	17	22	14	22
Toxicology	115	108	111	91	86	105	100	120	126	138
Human/animal genetics	113	118	112	153	160	142	172	203	202	212
Human/animal pathology	127	112	105	101	122	114	130	128	109	135
Human/animal pharmacology	234	252	242	244	266	279	274	259	278	316
Human/animal physiology	248	225	272	278	272	266	271	289	262	275
Zoology, other	139	167	132	122	125	134	114	117	145	100
Biological sciences, general	229	256	231	333	278	315	305	288	348	291
Biological sciences, other	123	160	116	142	146	159	164	161	126	138
Agricultural sciences, total	976	1,015	1,086	1,174	1,073	1,063	968	1,078	1,036	1,037
Agronomy & crop science[14]	143	141	140	143	117	123	104	143	114	110
Animal breeding/genetics	23	27	23	22	18	23	18	17	19	12
Animal nutrition	82	54	67	54	57	41	52	58	50	54
Dairy science[15]	N/A	12	16	20	19	14	11	11	14	9
Poultry science[15]	N/A	10	11	17	13	22	16	21	11	12
Animal sciences, other	76	86	95	90	92	97	74	86	85	90
Fisheries science & management[16]	32	42	34	42	39	26	38	48	49	46
Wildlife/range management[17]	23	39	52	58	59	55	54	52	50	64
Food sciences[18]	131	16	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Food engineering[18]	N/A	6	11	10	12	14	9	16	7	7
Food sciences, other[18]	N/A	119	147	141	137	151	141	153	135	142
Forestry science[19]	100	15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Forest biology[19]	N/A	21	22	27	17	29	18	20	24	19
Forest engineering[19]	N/A	3	1	2	2	2	3	N/A	4	0
Forest management[19]	N/A	18	21	14	22	16	17	17	20	22
Wood science & pulp/paper technology[19]	N/A	7	16	16	16	21	20	26	26	18
Conservation/renewable natural resources[19]	N/A	7	12	16	19	9	13	21	24	13
Forestry & related sciences, other[19]	N/A	35	57	62	45	62	55	59	71	56
Horticulture science	71	61	75	101	78	65	62	65	67	73
Plant breeding/genetics	70	83	64	87	69	82	68	81	72	63
Plant pathology	76	46	63	64	90	63	58	55	52	90
Plant protection/pest management[20]	N/A	1	6	4	2	N/A	N/A	N/A	N/A	N/A
Plant sciences, other	20	23	15	23	17	29	28	24	30	21
Soil sciences[21]	74	18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Soil chemistry/ microbiology[21]	N/A	33	28	27	24	24	26	21	27	29
Soil sciences, other[21]	N/A	62	75	91	78	63	59	69	72	78
Agricultural sciences, general	5	9	7	5	3	9	10	4	6	5
Agricultural sciences, other	50	21	27	38	28	23	14	11	7	4

See explanatory information, if any, and SOURCE at end of table.

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Table 1. Science and engineering (S&E) doctorates awarded, by field of study and year of doctorate: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Psychology, total	3,173	3,074	3,208	3,281	3,250	3,263	3,420	3,379	3,429	3,491
Clinical	1,214	1,095	1,259	1,337	1,305	1,309	1,373	1,285	1,291	1,325
Cognitive psychology & psycholinguistics [22]	80	83	79	76	94	101	104	129	104	128
Comparative	9	7	8	8	7	2	5	8	4	3
Counseling	486	482	501	466	497	507	488	497	470	464
Developmental & child [23]	200	176	148	159	155	170	202	179	152	188
Educational	89	103	105	98	110	91	91	69	74	92
Experimental	146	135	146	143	142	154	143	139	151	128
Family & marriage counseling [10]	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A	57	52
Industrial/organizational	107	118	104	126	142	138	159	127	155	162
Physiological/ psychobiology [24]	69	85	62	46	45	55	85	93	92	80
Quantitative	13	12	11	15	7	10	16	17	13	19
Personality	25	18	28	20	13	17	22	19	16	24
Psychometrics	9	11	6	8	9	5	9	5	10	11
School	93	115	107	82	82	88	95	84	91	82
Social	133	140	128	145	147	139	125	153	155	170
Psychology, general	343	368	364	371	324	295	306	280	306	279
Psychology, other	157	126	152	181	171	182	197	285	288	284
Social sciences, total	3,164	3,236	3,324	3,332	3,556	3,610	3,769	3,901	3,878	3,999
Economics, total	960	1,008	1,062	1,007	1,053	1,051	1,067	1,101	1,152	1,177
Agricultural economics	139	156	164	145	168	141	137	162	173	169
Econometrics	25	27	26	26	24	25	24	26	27	29
Economics	796	825	872	836	861	885	906	913	952	979
Political science, total	647	634	700	734	740	804	824	930	994	928
International relations & affairs [25]	82	77	94	97	88	76	102	112	73	99
Political science/government	404	392	430	462	434	513	507	589	600	621
Public administration	78	92	97	68	107	108	117	135	128	104
Public policy analysis [26]	83	73	79	87	111	107	98	94	93	104
Sociology, total	449	468	458	448	493	512	535	548	555	527
Demography/population studies [27]	26	19	22	20	28	17	22	23	15	11
Sociology	423	449	436	428	465	495	513	525	540	516
Other social sciences, total	1,108	1,126	1,104	1,143	1,270	1,243	1,343	1,322	1,277	1,367
American studies	75	70	76	72	92	81	101	88	94	115
Anthropology	352	325	325	324	341	320	342	384	375	396
Archaeology	31	23	26	22	33	33	38	34	35	21
Area studies	17	16	17	22	24	33	36	34	27	28
Criminology	29	43	32	42	35	37	39	41	44	60
Geography	111	129	105	131	108	111	137	146	150	165
History/philosophy of science & technology [28]	25	22	20	26	27	28	37	27	41	37
Linguistics	199	166	188	167	227	266	214	221	201	230
Statistics	49	47	69	69	31	29	48	46	48	48
Urban affairs & studies [29]	72	86	62	67	90	86	123	132	103	106
Social sciences, general	30	28	26	23	36	33	32	21	35	26
Social sciences, other	118	171	158	178	226	186	196	148	124	135

See explanatory information, if any, and SOURCE at end of table

Table 1. Science and engineering (S&E) doctorates awarded, by field of study and year of doctorate: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Non-S&E, total [30]	12,476	12,568	12,595	13,199	13,511	14,215	14,358	14,829	15,208	15,185
Health	800	882	974	956	1,041	1,112	1,197	1,296	1,330	1,324
Humanities [31]	3,170	3,274	3,242	3,535	3,720	4,036	4,092	4,374	4,690	4,713
Education	6,454	6,362	6,281	6,510	6,454	6,677	6,689	6,708	6,649	6,772
Professional/other	2,052	2,050	2,098	2,198	2,296	2,390	2,380	2,451	2,539	2,376
Grand total, all fields	32,370	33,500	34,327	36,067	37,534	38,890	39,801	41,034	41,743	42,415

[1] In 1993 this subfield was changed from "Polymer engineering" to "Polymer and plastics engineering."

[2] In 1993 this subfield was changed from "Industrial engineering" to "Industrial and manufacturing engineering."

[3] In 1993 this subfield was changed from "Ceramic engineering" to "Ceramic sciences engineering."

[4] These subfields were deleted in 1991: "Naval architecture/marine engineering," "Electron physics," and "Applied geology."

[5] In 1993 this subfield was changed from "Pharmaceutical chemistry" to "Medicinal and pharmaceutical chemistry."

[6] In 1993 this subfield was changed from "Atomic/molecular physics" to "Chemical and atomic/molecular physics."

[7] In 1993 this subfield was changed from "Plasma physics" to "Plasma and high-temperature physics."

[8] In 1993 this subfield was changed from "Solid state physics" to "Solid state and low-temperature physics."

[9] In 1993 this subfield was changed from "Math probability and statistics" to "Mathematical statistics."

[10] These subfields were introduced in 1995: "Biomedical sciences" and "Family and marriage counseling."

[11] "Biotechnology research" was introduced in 1993.

[12] In 1990 this subfield was changed from "Embryology" to "Developmental biology/embryology."

[13] In 1993 this subfield was changed from "Immunology" to "Biological immunology."

[14] In 1993 this subfield was changed from "Agronomy" to "Agronomy and crop science."

[15] These subfields were introduced in 1988: "Dairy science" and "Poultry science."

[16] In 1993 this subfield was changed from "Fisheries science" to "Fisheries science and management."

[17] In 1988 this subfield was changed from "Wildlife management" to "Wildlife/range management."

[18] In 1988 "Food sciences" was separated into "Food distribution," "Food engineering," and "Food sciences, other."

[19] In 1988 "Forestry science" was separated into "Forest biology," "Forest engineering," "Forest management," "Wood science," "Renewable natural resources," and "Foresty and related sciences, other." In 1993 "Pulp and paper technology" was added to "Wood science," and "Conservation" was added to "Renewable natural resources." "Forest engineering" was deleted from the survey in 1994 and reintroduced in 1995.

[20] "Plant protection/pest management" was introduced in 1988 and deleted in 1991.

[21] In 1988 "Soil sciences" was separated into "Soil chemistry/microbiology" and "Soil sciences, other."

[22] In 1993 this subfield was changed from "Cognitive psychology" to "Cognitive psychology and psycholinguistics."

[23] In 1993 this subfield was changed from "Developmental psychology" to "Developmental and child psychology."

[24] In 1993 this subfield was changed from "Physiological psychology" to "Physiological psychology/psychobiology."

[25] In 1993 this subfield was changed from "International relations" to "International relations and affairs."

[26] In 1993 this subfield was changed from "Public policy studies" to "Public policy analysis."

[27] In 1993 this subfield was changed from "Demography" to "Demography and population studies."

[28] In 1993 this subfield was changed from "History of science" to "History and philosophy of science and technology."

[29] In 1993 this subfield was changed from "Urban studies" to "Urban affairs and studies."

[30] Non-S&E doctorates include those whose field of specialization is unknown.

[31] Categories differ from those published by other Federal sponsors and the National Research Council in that linguistics, history of science, American studies, and archaeology are included not in humanities but in social science.

KEY: N/A = Not available (i.e., the subfield was not identified separately in the questionnaire for that year)

SOURCE: National Science Foundation/SRS, Survey of Earned Doctorates

Table 2. Science and engineering (S&E) doctorates awarded to women, by field of study and year of doctorate: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	Percent women	
											1987	1996
S&E, total	5,312	5,662	6,109	6,370	6,932	7,080	7,652	7,920	8,288	8,646	26.7	31.8
Engineering, total	242	286	375	415	467	506	522	635	696	776	6.5	12.3
Aeronautical/astronautical engineering	10	9	8	4	7	8	8	11	14	24	7.0	8.4
Chemical engineering, total	60	65	80	78	83	113	94	113	109	143	10.3	17.9
Chemical	56	60	74	71	75	101	83	101	96	126	10.6	18.5
Petroleum	0	2	1	0	1	3	5	3	1	3	0	5.8
Polymer/plastics [1]	4	3	5	7	7	9	6	9	12	14	11.8	21.5
Civil engineering, total	18	30	54	49	41	50	54	80	76	79	3.8	11.3
Civil	17	25	45	39	31	36	45	56	55	64	3.9	10.7
Environmental health	1	5	9	10	10	14	9	24	21	15	2.8	15.3
Electrical engineering, total	32	48	67	84	79	115	125	147	173	169	4.1	9.7
Communications	0	3	1	2	2	1	2	5	5	2	0	6.3
Computer	2	7	12	11	9	13	15	25	18	23	3.2	11.1
Electrical/electronics	30	38	54	71	68	101	108	117	150	144	4.3	9.6
Industrial/manufacturing engineering [2]	13	19	18	25	17	25	27	33	50	51	10.8	19.8
Materials/metallurgical engineering, total	45	33	45	49	77	61	78	83	95	83	11.5	14.5
Ceramic sciences [3]	4	3	4	11	10	9	6	9	5	3	9.5	7.3
Materials science	36	25	35	31	59	50	67	69	84	71	15.1	15.1
Metallurgical	5	5	6	7	8	2	5	5	6	9	4.5	14.8
Mechanical engineering, total	17	29	29	38	57	45	57	69	64	78	2.6	7.4
Mechanical	14	26	22	29	50	33	46	60	56	68	2.6	7.2
Engineering mechanics	3	3	7	9	7	12	11	9	8	10	2.7	9.5
Other engineering, total	47	53	74	88	106	89	79	99	115	149	8.4	16.5
Agricultural	3	3	6	7	8	6	6	10	7	17	4.1	16.3
Bioengineering/biomedical	15	18	26	23	27	33	31	45	48	49	20.0	22.3
Engineering physics	1	0	0	1	2	2	3	3	1	3	7.7	8.1
Engineering science	0	3	3	6	3	6	3	3	6	4	0	7.7
Mining/mineral	1	1	4	2	6	3	1	3	0	3	3.7	9.7
Naval architecture/marine [4]	0	0	1	1	0	N/A	N/A	N/A	N/A	N/A	0	
Nuclear	2	4	7	9	6	9	5	8	9	9	2.4	8.0
Ocean	1	0	2	2	1	0	1	2	3	3	4.2	11.5
Operations research	7	4	14	6	22	11	10	7	8	16	13.7	21.6
Systems	3	7	3	3	4	3	4	5	5	9	6.4	19.1
Engineering, general	8	2	2	10	7	3	3	4	9	11	14.8	18.3
Engineering, other	6	11	6	18	20	13	12	9	19	25	7.6	18.2
Sciences, total	5,070	5,376	5,734	5,955	6,465	6,574	7,130	7,285	7,592	7,870	31.3	37.6
Physical sciences, total	528	567	619	661	679	770	780	828	878	842	16.3	21.9
Astronomy, total	13	16	17	20	14	19	25	25	30	41	13.0	21.4
Astronomy	7	13	8	13	7	11	12	9	18	21	15.2	25.0
Astrophysics	6	3	9	7	7	8	13	16	12	20	11.1	18.5
Chemistry, total	406	427	499	503	517	579	582	625	661	605	20.6	28.2
Analytical	72	60	63	68	83	95	91	102	109	111	22.9	32.1
Inorganic	59	66	74	60	73	69	59	87	92	68	24.6	27.3
Medicinal/pharmaceutical [5]	16	19	21	20	27	27	38	26	32	32	24.6	33.3
Nuclear	0	0	0	2	4	1	0	0	3	0	0	0
Organic	88	89	105	104	108	119	131	128	134	118	17.2	23.3
Physical	59	71	87	76	86	109	88	93	93	85	19.5	28.3
Polymer	13	12	15	13	24	12	22	23	28	30	13.5	24.8
Theoretical	17	9	9	14	7	16	16	17	10	14	37.0	24.6
Chemistry, general	53	73	91	128	76	107	112	126	135	119	17.8	30.1
Chemistry, other	29	28	34	18	29	24	25	23	25	28	31.9	38.9

See explanatory information, if any, and SOURCE at end of table.

Table 2. Science and engineering (S&E) doctorates awarded to women, by field of study and year of doctorate: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	Percent women	
											1987	1996
Physics, total	107	114	101	130	142	167	169	175	182	193	9.4	13.0
Acoustics	0	2	0	2	2	0	1	2	3	2	0	10.5
Chemical & atomic/molecular[6]	4	8	8	7	4	6	14	17	15	10	5.1	7.8
Electron[4]	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	0	-
Elementary particle	15	16	10	14	20	12	18	16	7	19	9.4	10.9
Fluids	0	0	1	1	0	1	2	1	0	4	0	19.0
Nuclear	4	6	8	5	7	12	8	9	12	9	5.4	10.3
Optics	5	6	7	5	13	9	14	14	13	20	10.0	15.5
Plasma & high-temperature[7]	5	4	4	2	2	4	4	8	5	2	6.9	4.2
Polymer	3	0	1	3	3	1	5	4	3	12	20.0	36.4
Solid state & low-temperature[8]	24	35	23	35	42	53	42	53	57	54	8.4	14.8
Physics, general	31	25	19	33	31	42	46	30	41	39	13.0	12.0
Physics, other	16	12	20	23	18	27	15	21	26	22	13.4	14.1
Other physical sciences	2	10	2	8	6	5	4	3	5	3	7.7	23.1
Earth, atmospheric, and ocean sciences, total	112	135	148	141	179	188	160	183	170	172	18.6	21.7
Atmospheric sciences, total	14	11	10	14	16	27	18	26	23	22	16.1	17.6
Atmospheric dynamics	3	2	2	4	3	4	5	9	3	4	17.6	19.0
Atmospheric physics/chemistry	4	0	2	1	2	5	2	5	8	7	16.7	31.8
Meteorology	0	7	0	3	7	10	3	8	3	2	0	5.7
Atmospheric science/meteorology, general	4	1	3	5	3	7	7	4	7	5	25.0	15.2
Atmospheric science/meteorology, other	3	1	3	1	1	1	1	0	2	4	23.1	28.6
Geosciences, total	76	82	92	85	124	115	89	95	91	88	20.3	19.5
Applied geology[4]	1	1	0	3	0	N/A	N/A	N/A	N/A	N/A	20.0	-
Geology	25	36	35	32	34	35	35	32	38	36	21.9	22.2
Geochemistry	9	7	13	9	19	16	13	10	10	10	29.0	20.4
Geomorphology/glacial geology	2	3	3	1	2	5	3	2	4	1	11.1	9.1
Geophysics/seismology	11	8	11	15	20	23	14	24	19	14	14.7	13.9
Hydrology/water resources	5	5	2	1	2	7	9	3	4	5	27.8	16.1
Mineralogy/petrology	8	3	5	4	15	6	1	6	4	11	33.3	47.8
Paleontology	5	3	4	2	7	2	5	2	3	4	23.8	28.6
Stratigraphy/sedimentation	2	8	6	5	8	10	5	4	1	3	9.1	25.0
Geological & related sciences, general	3	2	2	5	9	4	2	1	4	2	16.7	7.4
Geological & related sciences, other	5	6	11	8	8	7	2	11	4	2	17.2	9.1
Oceanography, total	16	26	26	31	26	29	35	38	28	39	14.4	29.1
Marine sciences	3	9	6	7	2	11	8	11	8	5	7.9	18.5
Oceanography	13	17	20	24	24	18	27	27	20	34	17.8	31.8
Other environmental sciences	6	16	20	11	13	17	18	24	28	23	20.7	27.7
Mathematical/computer sciences, total	190	177	263	268	316	325	402	373	451	370	16.0	18.1
Mathematics, total	125	121	155	158	199	205	264	236	265	231	16.9	20.6
Algebra	10	10	10	6	16	13	28	24	24	18	17.5	23.1
Analysis/functional analysis	6	15	20	15	21	18	23	16	18	15	7.0	15.0
Applied mathematics	29	17	28	34	27	44	43	39	47	52	22.1	22.6
Computing theory	4	3	1	1	3	0	3	2	2	2	28.6	11.1
Geometry	3	4	7	8	5	6	7	4	8	14	10.0	19.4
Logic	2	2	5	3	1	2	4	6	7	1	11.1	6.3
Mathematical statistics[9]	36	31	38	31	56	46	57	50	54	47	25.2	26.4
Number theory	2	5	5	1	8	4	4	5	9	7	13.3	16.7
Operations research	1	3	4	2	4	6	9	9	5	4	4.5	19.0
Topology	3	3	8	11	18	16	9	11	8	5	7.3	9.1
Mathematics, general	22	20	17	32	31	37	56	54	64	45	16.1	19.3
Mathematics, other	7	8	12	14	9	13	21	16	19	21	15.2	26.6
Computer sciences, total	65	56	108	110	117	120	138	137	186	139	14.4	15.1
Computer science	51	39	69	85	96	91	123	118	160	116	13.3	13.9
Information science/systems	14	17	39	25	21	29	15	19	26	23	21.2	27.4

See explanatory information, if any, and SOURCE at end of table.

Table 2. Science and engineering (S&E) doctorates awarded to women, by field of study and year of doctorate: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	Percent women	
											1987	1996
Biological/agricultural sciences, total	1,531	1,691	1,769	1,861	1,982	2,064	2,278	2,357	2,446	2,697	31.8	39.9
Biological sciences, total	1,360	1,505	1,542	1,615	1,773	1,831	2,050	2,108	2,218	2,415	35.4	42.2
Bacteriology	6	2	2	4	5	5	6	11	6	8	46.2	50.0
Biochemistry	199	203	268	237	289	284	318	320	341	317	34.7	39.9
Biomedical sciences[10]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	42	54	-	38.6
Biophysics	22	21	21	23	26	33	21	33	46	41	25.6	28.9
Biotechnology research[11]	N/A	N/A	N/A	N/A	N/A	N/A	4	2	2	1	-	16.7
Plant genetics	7	6	3	7	5	8	12	5	12	16	26.9	39.0
Plant pathology	10	9	8	12	13	10	15	11	10	13	30.3	34.2
Plant physiology	15	23	15	19	19	16	19	21	21	29	24.2	39.7
Botany, other	36	41	52	33	39	45	43	46	34	44	34.0	41.9
Anatomy	42	32	27	29	31	31	34	29	25	20	45.7	42.6
Biometrics/biostatistics	14	15	20	18	29	24	21	33	23	34	37.8	42.0
Cell biology	55	55	57	69	63	80	116	102	117	107	43.3	45.9
Developmental biology/ embryology[12]	0	3	4	12	20	22	25	32	30	49	0	51.0
Ecology	38	47	36	52	60	65	67	70	64	84	24.1	34.3
Endocrinology	11	10	10	11	16	12	12	8	6	13	57.9	54.2
Entomology	25	26	23	26	35	35	28	28	27	36	20.3	26.5
Biological immunology[13]	53	91	61	72	76	83	73	74	82	129	39.0	54.2
Microbiology	103	120	124	116	150	157	183	177	188	185	34.2	41.7
Molecular biology	116	130	153	152	182	194	237	268	265	291	38.3	44.7
Neuroscience	48	60	63	76	88	92	110	129	121	165	31.4	40.8
Nutritional sciences	97	89	91	88	70	95	99	102	92	98	68.8	69.0
Parasitology	5	8	5	4	7	8	7	9	7	12	31.3	54.5
Toxicology	34	30	39	36	30	33	43	50	50	60	29.6	43.5
Human/animal genetics	54	57	57	73	71	61	76	87	92	101	47.8	47.6
Human/animal pathology	48	43	41	32	46	41	45	45	38	52	37.8	38.5
Human/animal pharmacology	86	92	99	92	91	92	121	106	129	142	36.8	44.9
Human/animal physiology	76	89	105	98	107	82	100	106	103	107	30.6	38.9
Zoology, other	44	43	35	37	39	45	32	32	50	31	31.7	31.0
Biological sciences, general	81	97	77	140	113	115	113	117	148	120	35.4	41.2
Biological sciences, other	35	63	46	47	53	63	70	55	47	56	28.5	40.6
Agricultural sciences, total	171	186	227	246	209	233	228	249	228	282	17.5	27.2
Agronomy & crop science[14]	17	19	20	21	11	23	19	17	13	17	11.9	15.5
Animal breeding/genetics	3	2	3	3	2	6	4	3	1	3	13.0	25.0
Animal nutrition	13	12	15	13	10	8	7	10	9	11	15.9	20.4
Dairy science[15]	N/A	1	1	2	4	2	2	1	3	2	-	22.2
Poultry science[15]	N/A	2	2	3	1	6	6	5	0	3	-	25.0
Animal sciences, other	16	13	25	11	20	21	19	25	19	26	21.1	28.9
Fisheries science & management[16]	0	8	5	6	4	1	4	11	9	10	0	21.7
Wildlife/range management[17]	1	8	10	6	8	7	17	13	8	22	4.3	34.4
Food sciences[18]	48	3	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	36.6	-
Food engineering[18]	N/A	1	1	2	2	2	2	2	0	0	-	0
Food sciences, other[18]	N/A	36	53	54	46	60	57	69	54	69	-	48.6
Forestry science[19]	5	2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.0	-
Forest biology[19]	N/A	3	3	8	3	8	7	6	5	4	-	21.1
Forest engineering[19]	N/A	0	0	0	1	0	0	N/A	0	0	-	0
Forest management[19]	N/A	2	2	1	4	1	0	2	6	2	-	9.1
Wood science & pulp/paper technology[19]	N/A	0	0	0	2	2	3	6	6	3	-	16.7
Conservation/renewable natural resources[19]	N/A	0	1	3	3	1	4	6	5	3	-	23.1
Forestry & related sciences, other[19]	N/A	6	8	10	5	9	9	6	13	18	-	32.1
Horticulture science	16	16	19	27	19	16	15	14	22	22	22.5	30.1
Plant breeding/genetics	11	12	13	20	10	12	14	13	15	13	15.7	20.6
Plant pathology	22	12	24	25	26	20	15	20	9	27	28.9	30.0
Plant protection/pest management[20]	N/A	0	0	1	0	N/A	N/A	N/A	N/A	N/A	-	-
Plant sciences, other	3	3	4	4	4	6	9	9	3	3	15.0	14.3
Soil sciences[21]	7	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9.5	-
Soil chemistry/ microbiology[21]	N/A	7	7	6	6	3	5	4	5	9	-	31.0
Soil sciences, other[21]	N/A	11	7	8	11	12	4	6	18	14	-	17.9
Agricultural sciences, general	0	3	2	0	1	2	2	0	3	0	0	0
Agricultural sciences, other	9	3	2	12	6	5	4	1	2	1	18.0	25.0

See explanatory information, if any, and SOURCE at end of table.

Table 2. Science and engineering (S&E) doctorates awarded to women, by field of study and year of doctorate: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	Percent women	
											1987	1996
Psychology, total	1,698	1,681	1,800	1,913	1,996	1,928	2,088	2,101	2,180	2,328	53.5	66.7
Clinical	667	612	710	785	848	810	873	842	870	919	54.9	69.4
Cognitive psychology & psycholinguistics [22]	41	34	33	35	46	47	48	56	52	60	51.2	46.9
Comparative	6	4	1	3	5	2	3	7	1	2	66.7	66.7
Counseling	254	261	284	281	306	289	284	310	297	303	52.3	65.3
Developmental & child [23]	139	131	116	112	119	131	155	132	121	154	69.5	81.9
Educational	50	65	60	69	64	69	67	39	53	66	56.2	71.7
Experimental	54	61	70	49	64	73	68	71	83	68	37.0	53.1
Family & marriage counseling [10]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	37	28	-	53.8
Industrial/organizational	49	54	49	53	76	64	73	69	89	99	45.8	61.1
Physiological/ psychobiology [24]	32	45	33	28	21	25	50	52	35	41	46.4	51.2
Quantitative	7	5	6	3	2	5	11	8	9	7	53.8	36.8
Personality	11	8	17	10	4	8	12	12	9	11	44.0	45.8
Psychometrics	3	6	3	4	3	2	2	1	4	3	33.3	27.3
School	53	66	69	53	57	59	65	53	62	71	57.0	86.6
Social	72	75	68	92	86	78	67	100	84	111	54.1	65.3
Psychology, general	173	196	204	233	185	168	185	158	185	180	50.4	64.5
Psychology, other	87	58	77	103	110	98	125	191	189	205	55.4	72.2
Social sciences, total	1,011	1,125	1,135	1,111	1,313	1,299	1,422	1,443	1,467	1,461	32.0	36.5
Economics, total	163	198	198	200	217	219	246	249	279	263	17.0	22.3
Agricultural economics	24	31	25	27	38	28	31	20	42	37	17.3	21.9
Econometrics	4	4	2	3	5	2	7	4	4	8	16.0	27.6
Economics	135	163	171	170	174	189	208	225	233	218	17.0	22.3
Political science, total	175	164	201	170	211	235	246	282	266	305	27.0	32.9
International relations & affairs [25]	15	14	29	15	24	24	28	24	21	32	18.3	32.3
Political science/government	111	96	107	108	117	142	129	173	167	186	27.5	30.0
Public administration	19	29	37	22	32	30	41	47	43	37	24.4	35.6
Public policy analysis [26]	30	25	28	25	38	39	48	38	35	50	36.1	48.1
Sociology, total	175	249	232	218	246	250	255	283	294	276	39.0	52.4
Demography/population studies [27]	7	11	10	11	16	5	12	12	6	2	26.9	18.2
Sociology	168	238	222	207	230	245	243	271	288	274	39.7	53.1
Other social sciences, total	498	514	504	523	639	595	675	629	628	617	44.9	45.1
American studies	39	43	48	37	56	47	57	48	53	67	52.0	58.3
Anthropology	181	170	148	173	210	155	213	208	219	214	51.4	54.0
Archaeology	17	8	14	12	20	17	18	17	18	11	54.8	52.4
Area studies	5	5	5	9	5	11	11	17	12	9	29.4	32.1
Criminology	7	15	10	16	18	15	15	12	23	25	24.1	41.7
Geography	26	33	25	35	33	29	40	35	43	45	23.4	27.3
History/philosophy of science & technology [28]	10	10	9	9	11	8	16	10	18	10	40.0	27.0
Linguistics	106	83	106	90	112	133	118	134	102	113	53.3	49.1
Statistics	13	9	20	12	10	11	14	16	11	7	26.5	14.6
Urban affairs & studies [29]	22	31	23	21	22	31	44	43	37	38	30.6	35.8
Social sciences, general	6	13	9	9	17	20	13	9	23	15	20.0	57.7
Social sciences, other	66	94	87	100	125	118	116	80	69	63	55.9	46.7

See explanatory information, if any, and SOURCE at end of table.

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Table 2. Science and engineering (S&E) doctorates awarded to women, by field of study and year of doctorate: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	Percent women	
											1987	1996
Non-S&E, total [30]	6,120	6,157	6,404	6,736	6,941	7,356	7,470	7,899	8,126	8,299	49.1	54.7
Health	475	549	629	592	668	710	777	843	843	861	59.4	65.0
Humanities [31]	1,399	1,431	1,436	1,600	1,720	1,858	1,919	2,054	2,254	2,343	44.1	49.7
Education	3,557	3,514	3,610	3,752	3,748	3,976	3,921	4,089	4,092	4,179	55.1	61.7
Professional/other	689	663	729	792	805	812	853	913	937	916	33.6	38.6
Grand total, all fields	11,432	11,819	12,513	13,106	13,873	14,436	15,122	15,819	16,414	16,945	35.3	40.0

1 In 1993 this subfield was changed from "Polymer engineering" to "Polymer and plastics engineering."

2 In 1993 this subfield was changed from "Industrial engineering" to "Industrial and manufacturing engineering."

3 In 1993 this subfield was changed from "Ceramic engineering" to "Ceramic sciences engineering."

4 These subfields were deleted in 1991: "Naval architecture/marine engineering," "Electron physics," and "Applied geology."

5 In 1993 this subfield was changed from "Pharmaceutical chemistry" to "Medicinal and pharmaceutical chemistry."

6 In 1993 this subfield was changed from "Atomic/molecular physics" to "Chemical and atomic/molecular physics."

7 In 1993 this subfield was changed from "Plasma physics" to "Plasma and high-temperature physics."

8 In 1993 this subfield was changed from "Solid state physics" to "Solid state and low-temperature physics."

9 In 1993 this subfield was changed from "Math probability and statistics" to "Mathematical statistics."

10 These subfields were introduced in 1995: "Biomedical sciences" and "Family and marriage counseling."

11 "Biotechnology research" was introduced in 1993.

12 In 1990 this subfield was changed from "Embryology" to "Developmental biology/embryology."

13 In 1993 this subfield was changed from "Immunology" to "Biological immunology."

14 In 1993 this subfield was changed from "Agronomy" to "Agronomy and crop science."

15 These subfields were introduced in 1988: "Dairy science" and "Poultry science."

16 In 1993 this subfield was changed from "Fisheries science" to "Fisheries science and management."

17 In 1988 this subfield was changed from "Wildlife management" to "Wildlife/range management."

18 In 1988 "Food sciences" was separated into "Food distribution," "Food engineering," and "Food sciences, other."

19 In 1988 "Forestry science" was separated into "Forest biology," "Forest engineering," "Forest management," "Wood science," "Renewable natural resources," and "Foresty and related sciences, other." In 1993 "Pulp and paper technology" was added to "Wood science," and "Conservation" was added to "Renewable natural resources." "Forest engineering" was deleted from the survey in 1994 and reintroduced in 1995.

20 "Plant protection-pest management" was introduced in 1988 and deleted in 1991.

21 In 1988 "Soil sciences" was separated into "Soil chemistry/microbiology" and "Soil sciences, other."

22 In 1993 this subfield was changed from "Cognitive psychology" to "Cognitive psychology and psycholinguistics."

23 In 1993 this subfield was changed from "Developmental psychology" to "Developmental and child psychology."

24 In 1993 this subfield was changed from "Physiological psychology" to "Physiological psychology/psychobiology."

25 In 1993 this subfield was changed from "International relations" to "International relations and affairs."

26 In 1993 this subfield was changed from "Public policy studies" to "Public policy analysis."

27 In 1993 this subfield was changed from "Demography" to "Demography and population studies."

28 In 1993 this subfield was changed from "History of science" to "History and philosophy of science and technology."

29 In 1993 this subfield was changed from "Urban studies" to "Urban affairs and studies."

30 Non-S&E doctorates include those whose field of specialization is unknown.

31 Categories differ from those published by other Federal sponsors and the National Research Council in that linguistics, history of science, American studies, and archaeology are included not in humanities but in social science.

KEY: - = Percent not available as data were not collected that year.
N/A = Not available (i.e., the subfield was not identified separately in the questionnaire for that year)

SOURCE: National Science Foundation/SRS, Survey of Earned Doctorates

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	U.S. citizens and permanent residents									
Science and engineering, total	14,055	14,498	14,592	15,364	15,914	15,942	16,573	18,187	18,996	18,628
Engineering, total	1,913	2,146	2,229	2,346	2,474	2,520	2,697	3,053	3,342	3,383
Chemical	350	408	444	392	399	378	377	380	381	392
Civil	203	233	247	241	213	215	227	292	309	305
Electrical	393	503	539	599	686	719	795	899	971	926
Mechanical	308	327	325	368	359	426	434	538	563	588
Other engineering	659	675	674	746	817	782	864	944	1,118	1,172
Sciences, total	12,142	12,352	12,363	13,018	13,440	13,422	13,876	15,134	15,654	15,245
Physical sciences, total	2,242	2,258	2,131	2,341	2,300	2,357	2,330	2,789	2,841	2,568
Astronomy	73	104	82	96	86	106	111	112	141	149
Chemistry	1,472	1,451	1,383	1,497	1,461	1,441	1,400	1,616	1,624	1,461
Physics	682	681	654	725	739	790	806	1,044	1,059	948
Other physical sciences	15	22	12	23	14	20	13	17	17	10
Earth, atmospheric, & ocean sciences	435	520	547	535	618	541	504	613	594	558
Mathematics	396	386	428	422	518	507	590	657	771	646
Computer sciences	275	326	396	403	451	489	509	543	616	513
Biological sciences	3,141	3,322	3,300	3,380	3,525	3,568	3,752	4,088	4,329	4,365
Agricultural sciences	632	610	651	687	620	573	506	616	598	576
Psychology	2,806	2,729	2,737	2,992	3,018	2,986	3,161	3,136	3,184	3,226
Social sciences	2,215	2,201	2,173	2,258	2,390	2,401	2,524	2,692	2,721	2,793
Non-S&E, total	10,507	10,414	10,435	11,239	11,516	12,048	12,135	12,707	13,063	12,878
Health	646	692	756	756	839	855	939	1,050	1,045	1,016
Humanities[1]	2,672	2,759	2,716	3,082	3,194	3,440	3,512	3,766	4,055	4,045
Education	5,665	5,477	5,410	5,787	5,788	6,017	5,968	6,063	5,995	6,062
Professional/other	1,524	1,486	1,553	1,614	1,695	1,736	1,716	1,828	1,968	1,755
Grand total, all fields	24,562	24,912	25,027	26,603	27,430	27,990	28,708	30,894	32,059	31,506
	U.S. citizens and permanent residents, American Indian/Alaskan Native									
Science and engineering, total	53	44	53	43	56	69	43	64	69	96
Engineering, total	7	4	7	4	6	11	2	6	10	14
Chemical	1	2	1	0	1	1	1	1	2	1
Civil	1	1	1	2	1	1	0	0	0	2
Electrical	3	0	0	0	2	4	0	1	2	2
Mechanical	1	1	0	0	1	1	0	0	2	3
Other engineering	1	0	5	2	1	4	1	4	4	6
Sciences, total	46	40	46	39	50	58	41	58	59	82
Physical sciences, total	7	6	10	3	10	12	5	6	9	6
Astronomy	0	0	2	0	0	0	1	0	0	0
Chemistry	6	5	5	3	9	6	2	4	7	4
Physics	1	1	3	0	1	6	2	2	2	2
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	0	2	6	1	3	1	4	1	0	2
Mathematics	0	2	0	1	0	2	1	2	2	1
Computer sciences	3	1	2	0	1	2	1	1	0	4
Biological sciences	11	6	7	4	10	13	7	16	15	21
Agricultural sciences	2	6	2	4	4	0	1	1	2	5
Psychology	16	7	11	19	13	15	15	12	14	18
Social sciences	7	10	8	7	9	13	7	19	17	25
Non-S&E, total	62	50	41	54	76	80	77	79	80	91
Health	3	5	3	1	5	5	6	6	9	4
Humanities[1]	10	4	7	6	10	18	10	20	18	18
Education	41	36	25	37	56	50	51	37	41	60
Professional/other	8	5	6	10	5	7	10	16	12	9
Grand total, all fields	115	94	94	97	132	149	120	143	149	187

See explanatory information, if any, and SOURCE at end of table

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	U.S. citizens and permanent residents, Asian/Pacific Islander									
Science and engineering, total	925	916	986	1,009	1,180	1,345	1,610	2,989	3,671	3,091
Engineering, total	327	332	361	359	405	451	527	867	1,033	895
Chemical	60	67	77	51	50	54	62	96	101	81
Civil	34	27	36	28	30	34	41	69	91	89
Electrical	78	103	93	115	140	175	199	304	322	275
Mechanical	61	57	66	69	62	78	93	179	190	166
Other engineering	94	78	89	96	123	110	132	219	329	284
Sciences, total	598	584	625	650	775	894	1,083	2,122	2,638	2,196
Physical sciences, total	143	138	156	164	172	227	265	600	751	504
Astronomy	1	5	2	5	0	4	4	10	22	12
Chemistry	108	85	96	99	122	135	157	332	416	296
Physics	34	47	57	58	50	88	103	255	312	195
Other physical sciences	0	1	1	2	0	0	1	3	1	1
Earth, atmospheric, & ocean sciences	18	14	23	15	17	27	22	89	104	77
Mathematics	41	33	24	27	57	52	79	142	208	140
Computer sciences	26	44	52	48	66	86	77	117	137	111
Biological sciences	170	171	201	200	261	269	370	720	925	888
Agricultural sciences	38	30	23	32	24	37	29	72	78	81
Psychology	48	47	55	53	59	59	73	109	122	124
Social sciences	114	107	91	111	119	137	168	273	313	271
Non-S&E, total	243	319	282	297	351	419	407	557	638	606
Health	35	30	22	39	44	52	45	94	94	89
Humanities[1]	53	64	79	62	81	99	108	151	193	191
Education	95	130	102	104	130	144	144	173	177	185
Professional/other	60	95	79	92	96	124	110	139	174	141
Grand total, all fields	1,168	1,235	1,268	1,306	1,531	1,764	2,017	3,546	4,309	3,697
	U.S. citizens and permanent residents, black									
Science and engineering, total	319	361	367	374	464	408	469	500	560	576
Engineering, total	25	31	33	40	55	49	50	54	71	74
Chemical	4	7	5	10	8	13	6	8	3	12
Civil	4	1	5	1	12	3	5	8	11	8
Electrical	3	7	9	8	16	17	15	17	24	22
Mechanical	3	1	5	5	3	5	3	7	14	10
Other engineering	11	15	9	16	16	11	21	14	19	22
Sciences, total	294	330	334	334	409	359	419	446	489	502
Physical sciences, total	20	34	31	30	32	25	41	46	43	60
Astronomy	2	0	0	1	0	1	2	0	1	0
Chemistry	13	22	26	24	23	17	31	34	33	45
Physics	5	12	5	5	9	6	7	11	9	15
Other physical sciences	0	0	0	0	0	1	1	1	0	0
Earth, atmospheric, & ocean sciences	2	3	4	3	3	6	4	6	3	4
Mathematics	11	4	8	4	11	4	8	11	5	8
Computer sciences	2	2	1	1	8	5	6	10	11	12
Biological sciences	60	48	57	51	64	62	75	79	108	98
Agricultural sciences	13	20	14	15	17	14	16	22	17	25
Psychology	93	105	97	115	130	106	119	124	151	154
Social sciences	93	114	122	115	144	137	150	148	151	141
Non-S&E, total	591	609	596	676	702	708	811	779	917	881
Health	31	32	29	32	40	38	59	46	60	49
Humanities[1]	73	76	71	72	92	90	98	106	114	119
Education	417	417	432	496	472	501	557	521	629	609
Professional/other	70	84	64	76	98	79	97	106	114	104
Grand total, all fields	910	970	963	1,050	1,166	1,116	1,280	1,279	1,477	1,457

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	U.S. citizens and permanent residents, Hispanic									
Science and engineering, total	357	397	382	468	492	513	542	548	571	623
Engineering, total	34	63	47	54	60	71	66	66	77	98
Chemical	11	5	9	8	11	16	10	7	13	19
Civil	1	13	8	9	5	7	12	14	11	6
Electrical	6	14	14	13	15	17	17	21	15	26
Mechanical	5	7	3	5	9	11	5	8	8	13
Other engineering	11	24	13	19	20	20	22	16	30	34
Sciences, total	323	334	335	414	432	442	476	482	494	525
Physical sciences, total	56	63	59	72	65	72	79	90	73	66
Astronomy	0	2	2	2	1	4	2	2	4	2
Chemistry	44	48	43	57	46	42	51	59	43	35
Physics	12	13	14	13	18	26	26	29	26	29
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	5	7	9	13	16	16	13	8	13	19
Mathematics	11	4	11	10	9	12	16	13	15	10
Computer sciences	4	2	4	5	12	8	7	7	6	16
Biological sciences	62	76	71	89	95	102	114	131	127	131
Agricultural sciences	15	21	18	23	15	18	20	25	21	13
Psychology	95	93	93	109	122	133	131	133	145	173
Social sciences	75	68	70	93	98	81	96	75	94	97
Non-S&E, total	351	296	312	369	375	396	431	482	490	482
Health	11	13	11	17	16	13	24	25	30	38
Humanities[1]	114	102	100	127	136	129	145	168	153	174
Education	201	158	171	190	189	214	222	241	258	217
Professional/other	25	23	30	35	34	40	40	48	49	53
Grand total, all fields	708	693	694	837	867	909	973	1,030	1,061	1,105
	U.S. citizens and permanent residents, Puerto Rican									
Science and engineering, total	86	96	93	115	99	120	112	131	137	142
Engineering, total	4	13	7	6	9	13	10	10	13	22
Chemical	1	0	1	2	2	3	2	2	4	4
Civil	0	6	1	1	1	1	1	1	1	1
Electrical	2	2	1	2	0	3	5	3	3	4
Mechanical	0	1	3	0	2	1	1	1	1	3
Other engineering	1	4	1	1	4	5	1	3	4	10
Sciences, total	82	83	86	109	90	107	102	121	124	120
Physical sciences, total	26	23	20	24	17	20	17	26	21	12
Astronomy	0	0	1	1	0	1	0	0	1	0
Chemistry	26	19	16	20	14	14	14	19	17	9
Physics	0	4	3	3	3	5	3	7	3	3
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	0	0	0	5	0	3	1	0	2	3
Mathematics	6	1	4	2	0	2	1	1	1	3
Computer sciences	1	0	0	2	3	1	1	4	0	5
Biological sciences	18	20	18	24	23	27	27	28	30	32
Agricultural sciences	6	2	7	5	0	3	10	5	3	4
Psychology	15	26	21	26	20	35	24	43	44	48
Social sciences	10	11	16	21	27	16	21	14	23	13
Non-S&E, total	93	78	83	95	92	109	120	126	132	109
Health	3	4	4	6	3	4	3	6	12	7
Humanities[1]	29	23	22	28	30	22	36	38	30	38
Education	52	44	52	56	52	76	70	68	69	51
Professional/other	9	7	5	5	7	7	11	14	21	13
Grand total, all fields	179	174	176	210	191	229	232	257	269	251

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	U.S. citizens and permanent residents, Mexican American									
Science and engineering, total	79	94	95	104	126	120	122	145	150	149
Engineering, total	8	11	14	13	14	10	12	15	19	28
Chemical	1	0	4	2	4	1	1	1	3	4
Civil	1	0	1	2	2	2	0	2	7	2
Electrical	1	2	3	4	3	3	2	4	3	9
Mechanical	1	1	0	3	3	2	0	2	2	4
Other engineering	4	8	6	2	2	2	9	6	4	9
Sciences, total	71	83	81	91	112	110	110	130	131	121
Physical sciences, total	9	12	11	11	15	9	12	24	13	23
Astronomy	0	1	0	0	0	0	0	1	1	1
Chemistry	4	10	10	11	12	6	8	19	8	15
Physics	5	1	1	0	3	3	4	4	4	7
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	2	4	2	3	4	7	2	4	4	5
Mathematics	0	0	2	3	3	4	4	4	6	2
Computer sciences	1	0	0	0	0	3	1	2	3	1
Biological sciences	10	14	12	22	26	24	24	30	28	28
Agricultural sciences	3	3	6	8	5	5	4	6	4	2
Psychology	27	28	31	25	35	37	42	40	48	38
Social sciences	19	22	17	19	24	21	21	20	25	22
Non-S&E, total	100	96	83	86	106	99	130	163	140	144
Health	3	3	5	7	3	5	8	5	8	6
Humanities[1]	17	21	22	19	27	24	35	42	34	41
Education	73	63	50	50	67	58	74	102	93	79
Professional/other	7	9	6	10	9	12	13	14	5	18
Grand total, all fields	179	190	178	190	232	219	252	308	290	293
	U.S. citizens and permanent residents, other Hispanic									
Science and engineering, total	192	207	194	249	267	273	308	272	284	332
Engineering, total	22	39	26	35	37	48	44	41	45	48
Chemical	9	5	4	4	5	12	7	4	6	11
Civil	0	7	6	6	2	4	11	11	3	3
Electrical	3	10	10	7	12	11	10	14	9	13
Mechanical	4	5	0	2	4	8	4	5	5	6
Other engineering	6	12	6	16	14	13	12	7	22	15
Sciences, total	170	168	168	214	230	225	264	231	239	284
Physical sciences, total	21	28	28	37	33	43	50	40	39	31
Astronomy	0	1	1	1	1	3	2	1	2	1
Chemistry	14	19	17	26	20	22	29	21	18	11
Physics	7	8	10	10	12	18	19	18	19	19
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	3	3	7	5	12	6	10	4	7	11
Mathematics	5	3	5	5	6	6	11	8	8	5
Computer sciences	2	2	4	3	9	4	5	1	3	10
Biological sciences	34	42	41	43	46	51	63	73	69	71
Agricultural sciences	6	16	5	10	10	10	6	14	14	7
Psychology	53	39	41	58	67	61	65	50	53	87
Social sciences	46	35	37	53	47	44	54	41	46	62
Non-S&E, total	158	122	146	188	177	188	181	193	218	229
Health	5	6	2	4	10	4	13	14	10	25
Humanities[1]	68	58	56	80	79	83	74	88	89	95
Education	76	51	69	84	70	80	78	71	96	87
Professional/other	9	7	19	20	18	21	16	20	23	22
Grand total, all fields	350	329	340	437	444	461	489	465	502	561

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	U.S. citizens and permanent residents, white									
Science and engineering, total	12,052	12,455	12,501	13,170	13,323	13,326	13,737	13,889	13,902	13,999
Engineering, total	1,458	1,655	1,726	1,840	1,837	1,880	2,025	2,020	2,090	2,260
Chemical	266	317	345	318	322	284	295	259	256	274
Civil	158	183	191	196	159	166	168	199	194	199
Electrical	283	363	405	450	478	487	553	548	588	588
Mechanical	230	253	241	286	266	326	328	337	338	392
Other engineering	521	539	544	590	612	617	681	677	714	807
Sciences, total	10,594	10,800	10,775	11,330	11,486	11,446	11,712	11,869	11,812	11,739
Physical sciences, total	1,956	1,948	1,828	2,008	1,968	1,973	1,911	2,025	1,922	1,888
Astronomy	69	93	74	86	83	95	100	97	111	131
Chemistry	1,267	1,258	1,188	1,284	1,239	1,219	1,145	1,179	1,111	1,063
Physics	606	577	555	618	633	641	656	736	686	685
Other physical sciences	14	20	11	20	13	18	10	13	14	9
Earth, atmospheric, & ocean sciences	394	480	498	494	557	485	455	504	464	449
Mathematics	319	332	369	372	419	425	476	479	535	478
Computer sciences	229	265	319	339	355	378	410	401	453	356
Biological sciences	2,759	2,965	2,904	2,975	3,041	3,068	3,146	3,107	3,119	3,171
Agricultural sciences	554	518	570	601	545	493	438	487	473	444
Psychology	2,516	2,445	2,453	2,648	2,652	2,636	2,807	2,730	2,727	2,741
Social sciences	1,867	1,847	1,834	1,893	1,949	1,988	2,069	2,136	2,119	2,212
Non-S&E, total	9,070	9,005	9,069	9,708	9,862	10,299	10,315	10,705	10,817	10,686
Health	553	606	684	662	720	735	800	867	835	822
Humanities[1]	2,363	2,471	2,399	2,766	2,821	3,061	3,109	3,283	3,523	3,494
Education	4,820	4,668	4,634	4,900	4,889	5,051	4,965	5,044	4,853	4,940
Professional/other	1,334	1,260	1,352	1,380	1,432	1,452	1,441	1,511	1,606	1,430
Grand total, all fields	21,122	21,460	21,570	22,878	23,185	23,625	24,052	24,594	24,719	24,685
	U.S. citizens and permanent residents, male									
Science and engineering, total	9,631	9,887	9,671	10,182	10,317	10,365	10,549	11,693	12,083	11,668
Engineering, total	1,739	1,950	1,954	2,070	2,158	2,192	2,349	2,605	2,822	2,860
Chemical	298	355	375	330	339	296	313	302	293	294
Civil	192	218	207	207	188	192	195	237	257	258
Electrical	378	470	503	552	638	652	715	811	851	821
Mechanical	297	310	306	344	322	401	398	484	514	528
Other engineering	574	597	563	637	671	651	728	771	907	959
Sciences, total	7,892	7,937	7,717	8,112	8,159	8,173	8,200	9,088	9,261	8,808
Physical sciences, total	1,843	1,848	1,694	1,871	1,846	1,843	1,809	2,164	2,133	1,958
Astronomy	64	90	69	78	79	91	88	91	116	114
Chemistry	1,145	1,123	1,018	1,114	1,093	1,040	999	1,152	1,087	1,022
Physics	620	621	596	663	663	696	712	907	916	814
Other physical sciences	14	14	11	16	11	16	10	14	14	8
Earth, atmospheric, & ocean sciences	346	408	427	417	461	394	384	469	450	428
Mathematics	319	316	327	329	406	390	426	506	588	501
Computer sciences	221	280	312	313	357	406	400	449	473	422
Biological sciences	1,997	2,070	2,024	2,068	2,135	2,130	2,168	2,345	2,469	2,424
Agricultural sciences	506	482	487	528	483	423	372	456	463	401
Psychology	1,277	1,217	1,174	1,220	1,128	1,206	1,223	1,169	1,128	1,043
Social sciences	1,383	1,316	1,272	1,366	1,343	1,381	1,418	1,530	1,557	1,631
Non-S&E, total	5,060	5,001	4,864	5,173	5,295	5,447	5,439	5,679	5,793	5,515
Health	231	216	225	239	252	226	260	328	325	292
Humanities[1]	1,451	1,515	1,473	1,660	1,703	1,832	1,815	1,978	2,077	2,000
Education	2,453	2,337	2,221	2,358	2,347	2,347	2,378	2,307	2,243	2,238
Professional/other	925	933	945	916	993	1,042	986	1,066	1,148	985
Grand total, all fields	14,691	14,888	14,535	15,355	15,612	15,812	15,988	17,372	17,876	17,183

See explanatory information, if any, and SOURCE at end of table.

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Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	U.S. citizens and permanent residents, male, American Indian/Alaskan Native									
Science and engineering, total	32	29	33	25	37	42	25	40	44	62
Engineering, total	7	4	5	4	4	8	2	4	10	12
Chemical	1	2	1	0	0	1	1	1	2	1
Civil	1	1	0	2	1	0	0	0	0	1
Electrical	3	0	0	0	1	3	0	1	2	1
Mechanical	1	1	0	0	1	1	0	0	2	3
Other engineering	1	0	4	2	1	3	1	2	4	6
Sciences, total	25	25	28	21	33	34	23	36	34	50
Physical sciences, total	5	5	10	3	8	10	3	5	6	5
Astronomy	0	0	2	0	0	0	1	0	0	0
Chemistry	4	5	5	3	7	4	1	4	4	3
Physics	1	0	3	0	1	6	1	1	2	2
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	0	1	4	0	2	1	4	1	0	2
Mathematics	0	2	0	1	0	1	1	2	1	1
Computer sciences	2	1	1	0	1	2	0	0	0	2
Biological sciences	7	4	4	3	6	8	5	11	10	12
Agricultural sciences	2	4	1	4	4	0	1	1	2	2
Psychology	4	3	3	6	5	6	6	5	6	9
Social sciences	5	5	5	4	7	6	3	11	9	17
Non-S&E, total	30	23	16	27	37	40	35	31	38	40
Health	1	1	0	1	3	3	0	1	2	1
Humanities[1]	6	0	2	4	3	12	7	12	10	9
Education	18	18	10	16	29	20	21	10	17	22
Professional/other	5	4	4	6	2	5	7	8	9	8
Grand total, all fields	62	52	49	52	74	82	60	71	82	102
	U.S. citizens and permanent residents, male, Asian/Pacific Islander									
Science and engineering, total	694	694	745	757	806	927	1,079	2,169	2,557	2,108
Engineering, total	305	314	327	326	356	390	466	748	863	762
Chemical	54	61	66	40	41	38	55	71	76	63
Civil	32	26	33	25	26	32	39	65	77	75
Electrical	75	97	85	109	135	154	174	273	276	246
Mechanical	61	57	65	66	59	74	90	155	167	149
Other engineering	83	73	78	86	95	92	108	184	267	229
Sciences, total	389	380	418	431	450	537	613	1,421	1,694	1,346
Physical sciences, total	107	96	120	122	124	147	168	422	540	359
Astronomy	1	4	0	3	0	2	2	9	18	8
Chemistry	77	57	73	70	86	79	85	203	270	188
Physics	29	34	46	47	38	66	80	208	251	162
Other physical sciences	0	1	1	2	0	0	1	2	1	1
Earth, atmospheric, & ocean sciences	15	10	19	14	11	19	14	72	76	65
Mathematics	30	22	21	20	39	33	43	116	158	104
Computer sciences	20	38	42	41	51	74	58	101	107	95
Biological sciences	93	98	112	113	132	136	198	451	515	480
Agricultural sciences	31	23	17	26	16	25	20	52	62	51
Psychology	17	20	28	22	15	20	22	32	44	31
Social sciences	76	73	59	73	62	83	90	175	192	161
Non-S&E, total	130	176	160	152	166	209	208	300	312	280
Health	18	18	13	17	21	22	22	48	52	47
Humanities[1]	22	31	42	28	39	48	42	84	83	66
Education	46	59	43	39	45	48	58	66	59	71
Professional/other	44	68	62	68	61	91	86	102	118	96
Grand total, all fields	824	870	905	909	972	1,136	1,287	2,469	2,869	2,398

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	U.S. citizens and permanent residents, male, black									
Science and engineering, total	189	224	214	225	270	238	261	284	290	323
Engineering, total	24	27	30	34	47	43	39	41	56	55
Chemical	3	6	4	6	7	12	3	4	2	7
Civil	4	1	5	1	10	3	3	6	8	7
Electrical	3	5	9	7	14	15	13	14	20	17
Mechanical	3	1	5	5	2	5	3	6	13	7
Other engineering	10	14	7	13	14	8	17	11	13	17
Sciences, total	165	197	184	191	223	195	222	243	234	268
Physical sciences, total	17	26	24	23	27	19	31	33	25	47
Astronomy	2	0	0	1	0	0	2	0	1	0
Chemistry	11	15	19	17	18	12	22	25	16	35
Physics	4	11	5	5	9	6	7	7	8	12
Other physical sciences	0	0	0	0	0	1	0	1	0	0
Earth, atmospheric, & ocean sciences	1	3	3	1	2	5	4	5	3	2
Mathematics	9	4	5	3	7	4	7	8	4	6
Computer sciences	1	2	0	1	4	4	2	8	7	9
Biological sciences	35	25	33	29	32	38	43	34	65	58
Agricultural sciences	10	15	13	14	16	10	12	16	11	25
Psychology	34	47	36	43	44	28	44	46	39	39
Social sciences	58	75	70	77	91	87	79	93	80	82
Non-S&E, total	247	219	239	254	282	281	318	269	325	318
Health	12	8	9	14	17	14	18	11	18	13
Humanities[1]	34	40	35	37	44	47	56	51	53	53
Education	162	140	162	169	179	174	201	161	204	203
Professional/other	39	31	33	34	42	46	43	46	50	49
Grand total, all fields	436	443	453	479	552	519	579	553	615	641
	U.S. citizens and permanent residents, male, Hispanic									
Science and engineering, total	216	248	227	290	306	308	320	318	339	351
Engineering, total	29	57	39	45	50	56	54	60	66	84
Chemical	8	5	5	7	7	12	7	7	11	13
Civil	1	12	8	7	3	6	10	11	10	6
Electrical	6	12	13	12	15	14	14	21	14	23
Mechanical	5	6	2	4	7	9	5	7	8	13
Other engineering	9	22	11	15	18	15	18	14	23	29
Sciences, total	187	191	188	245	256	252	266	258	273	267
Physical sciences, total	39	47	41	46	54	52	59	69	52	54
Astronomy	0	2	2	2	1	3	2	2	2	1
Chemistry	29	35	26	33	37	26	33	43	29	28
Physics	10	10	13	11	16	23	24	24	21	25
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	4	3	6	9	14	10	11	6	7	13
Mathematics	9	4	7	6	5	9	14	10	11	10
Computer sciences	4	2	1	4	11	7	6	7	2	9
Biological sciences	38	49	50	56	56	59	57	69	80	65
Agricultural sciences	11	19	15	17	12	14	15	13	16	9
Psychology	32	38	30	52	52	55	45	43	48	53
Social sciences	50	29	38	55	52	46	59	41	57	54
Non-S&E, total	166	137	149	159	152	174	197	200	200	213
Health	3	7	4	2	7	4	8	7	15	16
Humanities[1]	62	47	51	52	64	66	72	79	71	84
Education	86	66	73	85	65	82	94	82	91	87
Professional/other	15	17	21	20	16	22	23	32	23	26
Grand total, all fields	382	385	376	449	458	482	517	518	539	564

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	U.S. citizens and permanent residents, male, Puerto Rican									
Science and engineering, total	53	58	54	67	52	71	70	72	74	74
Engineering, total	3	11	6	4	7	10	8	10	11	17
Chemical	1	0	1	2	1	3	2	2	3	2
Civil	0	5	1	1	1	1	0	1	1	1
Electrical	2	2	1	1	0	2	4	3	3	4
Mechanical	0	1	2	0	2	0	1	1	1	3
Other engineering	0	3	1	0	3	4	1	3	3	7
Sciences, total	50	47	48	63	45	61	62	62	63	57
Physical sciences, total	17	16	16	14	11	14	12	19	12	8
Astronomy	0	0	1	1	0	1	0	0	0	0
Chemistry	17	13	12	10	9	9	9	13	9	6
Physics	0	3	3	3	2	4	3	6	3	2
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	0	0	0	4	0	3	1	0	1	3
Mathematics	4	1	1	2	0	1	1	1	0	3
Computer sciences	1	0	0	2	3	1	0	4	0	4
Biological sciences	11	10	14	14	12	16	16	14	21	14
Agricultural sciences	3	2	5	4	0	3	7	2	3	3
Psychology	8	12	5	11	6	16	13	13	13	15
Social sciences	6	6	7	12	13	7	12	9	13	7
Non-S&E, total	41	30	32	37	32	39	51	51	46	40
Health	0	2	1	0	2	3	0	2	7	2
Humanities[1]	18	9	10	8	11	10	18	16	14	16
Education	19	15	17	26	16	23	25	23	19	17
Professional/other	4	4	4	3	3	3	8	10	6	5
Grand total, all fields	94	88	86	104	84	110	121	123	120	114
	U.S. citizens and permanent residents, male, Mexican American									
Science and engineering, total	52	59	57	67	84	79	73	87	89	95
Engineering, total	7	11	9	11	12	10	10	13	18	25
Chemical	1	0	1	2	3	1	1	1	2	3
Civil	1	0	1	1	2	2	0	2	7	2
Electrical	1	2	2	4	3	3	2	4	3	8
Mechanical	1	1	0	2	2	2	0	2	2	4
Other engineering	3	8	5	2	2	2	7	4	4	8
Sciences, total	45	48	48	56	72	69	63	74	71	70
Physical sciences, total	8	11	9	8	12	7	9	20	9	20
Astronomy	0	1	0	0	0	0	0	1	0	1
Chemistry	4	9	8	8	10	4	6	16	6	13
Physics	4	1	1	0	2	3	3	3	3	6
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	2	2	2	2	4	5	2	4	3	3
Mathematics	0	0	2	1	1	4	3	3	4	2
Computer sciences	1	0	0	0	0	3	1	2	1	1
Biological sciences	6	12	9	15	19	11	13	17	17	16
Agricultural sciences	3	1	6	7	4	4	3	4	3	1
Psychology	11	9	10	11	20	19	16	17	15	18
Social sciences	14	13	10	12	12	16	16	7	19	9
Non-S&E, total	55	54	46	51	48	46	59	74	70	71
Health	1	2	3	1	0	0	3	2	3	2
Humanities[1]	13	12	12	11	14	14	19	23	21	21
Education	36	33	26	31	28	26	30	38	42	38
Professional/other	5	7	5	8	6	6	7	11	4	10
Grand total, all fields	107	113	103	118	132	125	132	161	159	166

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	U.S. citizens and permanent residents, male, other Hispanic									
Science and engineering, total	111	131	116	156	170	158	177	159	176	182
Engineering, total	19	35	24	30	31	36	36	37	37	42
Chemical	6	5	3	3	3	8	4	4	6	8
Civil	0	7	6	5	0	3	10	8	2	3
Electrical	3	8	10	7	12	9	8	14	8	11
Mechanical	4	4	0	2	3	7	4	4	5	6
Other engineering	6	11	5	13	13	9	10	7	16	14
Sciences, total	92	96	92	126	139	122	141	122	139	140
Physical sciences, total	14	20	16	24	31	31	38	30	31	26
Astronomy	0	1	1	1	1	2	2	1	2	0
Chemistry	8	13	6	15	18	13	18	14	14	9
Physics	6	6	9	8	12	16	18	15	15	17
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	2	1	4	3	10	2	8	2	3	7
Mathematics	5	3	4	3	4	4	10	6	7	5
Computer sciences	2	2	1	2	8	3	5	1	1	4
Biological sciences	21	27	27	27	25	32	28	38	42	35
Agricultural sciences	5	16	4	6	8	7	5	7	10	5
Psychology	13	17	15	30	26	20	16	13	20	20
Social sciences	30	10	21	31	27	23	31	25	25	38
Non-S&E, total	70	53	71	71	72	89	87	75	84	102
Health	2	3	0	1	5	1	5	3	5	12
Humanities[1]	31	26	29	33	39	42	35	40	36	47
Education	31	18	30	28	21	33	39	21	30	32
Professional/other	6	6	12	9	7	13	8	11	13	11
Grand total, all fields	181	184	187	227	242	247	264	234	260	284
	U.S. citizens and permanent residents, male, white									
Science and engineering, total	8,222	8,427	8,213	8,648	8,584	8,623	8,725	8,731	8,680	8,646
Engineering, total	1,314	1,492	1,502	1,614	1,602	1,640	1,764	1,715	1,770	1,913
Chemical	223	272	293	270	277	225	244	211	196	205
Civil	149	171	157	167	143	147	143	153	160	168
Electrical	271	341	378	411	444	447	504	494	522	521
Mechanical	219	237	224	267	236	307	296	311	313	353
Other engineering	452	471	450	499	502	514	577	546	579	666
Sciences, total	6,908	6,935	6,711	7,034	6,982	6,983	6,961	7,016	6,910	6,733
Physical sciences, total	1,622	1,609	1,454	1,623	1,585	1,574	1,523	1,617	1,475	1,457
Astronomy	60	81	63	70	77	84	79	78	92	101
Chemistry	996	981	872	969	926	901	846	872	760	755
Physics	553	535	509	570	572	575	590	656	612	594
Other physical sciences	13	12	10	14	10	14	8	11	11	7
Earth, atmospheric, & ocean sciences	310	380	388	385	415	353	345	381	356	340
Mathematics	258	273	281	293	335	332	352	361	409	373
Computer sciences	184	225	252	259	282	309	327	326	349	295
Biological sciences	1,764	1,851	1,784	1,821	1,871	1,847	1,835	1,758	1,772	1,770
Agricultural sciences	445	408	421	455	422	364	323	367	369	307
Psychology	1,170	1,094	1,065	1,075	991	1,078	1,096	1,029	982	905
Social sciences	1,155	1,095	1,066	1,123	1,081	1,126	1,160	1,177	1,198	1,286
Non-S&E, total	4,388	4,368	4,215	4,512	4,569	4,656	4,623	4,827	4,854	4,582
Health	191	179	195	203	199	177	208	258	234	211
Humanities[1]	1,292	1,368	1,302	1,505	1,516	1,629	1,606	1,727	1,823	1,740
Education	2,102	2,023	1,911	2,029	2,002	1,997	1,992	1,968	1,858	1,830
Professional/other	803	798	807	775	852	853	817	874	939	801
Grand total, all fields	12,610	12,795	12,428	13,160	13,153	13,279	13,348	13,558	13,534	13,228

See explanatory information, if any, and SOURCE at end of table.

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Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	U.S. citizens and permanent residents, female									
Science and engineering, total	4,424	4,611	4,921	5,182	5,597	5,577	6,024	6,494	6,913	6,960
Engineering, total	174	196	275	276	316	328	348	448	520	523
Chemical	52	53	69	62	60	82	64	78	88	98
Civil	11	15	40	34	25	23	32	55	52	47
Electrical	15	33	36	47	48	67	80	88	120	105
Mechanical	11	17	19	24	37	25	36	54	49	60
Other engineering	85	78	111	109	146	131	136	173	211	213
Sciences, total	4,250	4,415	4,646	4,906	5,281	5,249	5,676	6,046	6,393	6,437
Physical sciences, total	399	410	437	470	454	514	521	625	708	610
Astronomy	9	14	13	18	7	15	23	21	25	35
Chemistry	327	328	365	383	368	401	401	464	537	439
Physics	62	60	58	62	76	94	94	137	143	134
Other physical sciences	1	8	1	7	3	4	3	3	3	2
Earth, atmospheric, & ocean sciences	89	112	120	118	157	147	120	144	144	130
Mathematics	77	70	101	93	112	117	164	151	183	145
Computer sciences	54	46	84	90	94	83	109	94	143	91
Biological sciences	1,144	1,252	1,276	1,312	1,390	1,438	1,584	1,743	1,860	1,941
Agricultural sciences	126	128	164	159	137	150	134	160	135	175
Psychology	1,529	1,512	1,563	1,772	1,890	1,780	1,938	1,967	2,056	2,183
Social sciences	832	885	901	892	1,047	1,020	1,106	1,162	1,164	1,162
Non-S&E, total	5,447	5,413	5,571	6,066	6,221	6,601	6,696	7,028	7,270	7,363
Health	415	476	531	517	587	629	679	722	720	724
Humanities[1]	1,221	1,244	1,243	1,422	1,491	1,608	1,697	1,788	1,978	2,045
Education	3,212	3,140	3,189	3,429	3,441	3,670	3,590	3,756	3,752	3,824
Professional/other	599	553	608	698	702	694	730	762	820	770
Grand total, all fields	9,871	10,024	10,492	11,248	11,818	12,178	12,720	13,522	14,183	14,323
	U.S. citizens and permanent residents, female, American Indian/Alaskan Native									
Science and engineering, total	21	15	20	18	19	27	18	24	25	34
Engineering, total	0	0	2	0	2	3	0	2	0	2
Chemical	0	0	0	0	1	0	0	0	0	0
Civil	0	0	1	0	0	1	0	0	0	1
Electrical	0	0	0	0	1	1	0	0	0	1
Mechanical	0	0	0	0	0	0	0	0	0	0
Other engineering	0	0	1	0	0	1	0	2	0	0
Sciences, total	21	15	18	18	17	24	18	22	25	32
Physical sciences, total	2	1	0	0	2	2	2	1	3	1
Astronomy	0	0	0	0	0	0	0	0	0	0
Chemistry	2	0	0	0	2	2	1	0	3	1
Physics	0	1	0	0	0	0	1	1	0	0
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	0	1	2	1	1	0	0	0	0	0
Mathematics	0	0	0	0	0	1	0	0	1	0
Computer sciences	1	0	1	0	0	0	1	1	0	2
Biological sciences	4	2	3	1	4	5	2	5	5	9
Agricultural sciences	0	2	1	0	0	0	0	0	0	3
Psychology	12	4	8	13	8	9	9	7	8	9
Social sciences	2	5	3	3	2	7	4	8	8	8
Non-S&E, total	32	27	25	27	39	40	42	48	42	51
Health	2	4	3	0	2	2	6	5	7	3
Humanities[1]	4	4	5	2	7	6	3	8	8	9
Education	23	18	15	21	27	30	30	27	24	38
Professional/other	3	1	2	4	3	2	3	8	3	1
Grand total, all fields	53	42	45	45	58	67	60	72	67	85

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial ethnic group, and major field of study of recipients: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	U.S. citizens and permanent residents, female, Asian/Pacific Islander									
Science and engineering, total	231	222	241	252	374	418	531	820	1,114	983
Engineering, total	22	18	34	33	49	61	61	119	170	133
Chemical	6	6	11	11	9	16	7	25	25	18
Civil	2	1	3	3	4	2	2	4	14	14
Electrical	3	6	8	6	5	21	25	31	46	29
Mechanical	0	0	1	3	3	4	3	24	23	17
Other engineering	11	5	11	10	28	18	24	35	62	55
Sciences, total	209	204	207	219	325	357	470	701	944	850
Physical sciences, total	36	42	36	42	48	80	97	178	211	145
Astronomy	0	1	2	2	0	2	2	1	4	4
Chemistry	31	28	23	29	36	56	72	129	146	108
Physics	5	13	11	11	12	22	23	47	61	33
Other physical sciences	0	0	0	0	0	0	0	1	0	0
Earth, atmospheric, & ocean sciences	3	4	4	1	6	8	8	17	28	12
Mathematics	11	11	3	7	18	19	36	26	50	36
Computer sciences	6	6	10	7	15	12	19	16	30	16
Biological sciences	77	73	89	87	129	133	172	269	410	408
Agricultural sciences	7	7	6	6	8	12	9	20	16	30
Psychology	31	27	27	31	44	39	51	77	78	93
Social sciences	38	34	32	38	57	54	78	98	121	110
Non-S&E, total	113	143	122	145	185	210	199	257	326	316
Health	17	12	9	22	23	30	23	46	42	42
Humanities[1]	31	33	37	34	42	51	66	67	110	105
Education	49	71	59	65	85	96	86	107	118	114
Professional/other	16	27	17	24	35	33	24	37	56	55
Grand total, all fields	344	365	363	397	559	628	730	1,077	1,440	1,299
	U.S. citizens and permanent residents, female, black									
Science and engineering, total	130	137	153	149	194	170	208	216	270	253
Engineering, total	1	4	3	6	8	6	11	13	15	19
Chemical	0	1	1	2	1	1	3	4	1	5
Civil	0	0	0	0	2	0	2	2	3	1
Electrical	0	2	0	1	2	2	2	3	4	5
Mechanical	0	0	0	0	1	0	0	1	1	3
Other engineering	1	1	2	3	2	3	4	3	6	5
Sciences, total	129	133	150	143	186	164	197	203	255	234
Physical sciences, total	3	8	7	7	5	6	10	13	18	13
Astronomy	0	0	0	0	0	1	0	0	0	0
Chemistry	2	7	7	7	5	5	9	9	17	10
Physics	1	1	0	0	0	0	0	4	1	3
Other physical sciences	0	0	0	0	0	0	1	0	0	0
Earth, atmospheric, & ocean sciences	1	0	1	2	1	1	0	1	0	2
Mathematics	2	0	3	1	4	0	1	3	1	2
Computer sciences	1	0	1	0	4	1	4	2	4	3
Biological sciences	25	23	24	22	32	24	32	45	43	40
Agricultural sciences	3	5	1	1	1	4	4	6	6	0
Psychology	59	58	61	72	86	78	75	78	112	115
Social sciences	35	39	52	38	53	50	71	55	71	59
Non-S&E, total	344	390	357	422	420	427	493	510	592	563
Health	19	24	20	18	23	24	41	35	42	36
Humanities[1]	39	36	36	35	48	43	42	55	61	66
Education	255	277	270	327	293	327	356	360	425	406
Professional/other	31	53	31	42	56	33	54	60	64	55
Grand total, all fields	474	527	510	571	614	597	701	726	862	816

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	U.S. citizens and permanent residents, female, Hispanic									
Science and engineering, total	141	149	155	178	186	205	222	230	232	272
Engineering, total	5	6	8	9	10	15	12	6	11	14
Chemical	3	0	4	1	4	4	3	0	2	6
Civil	0	1	0	2	2	1	2	3	1	0
Electrical	0	2	1	1	0	3	3	0	1	3
Mechanical	0	1	1	1	2	2	0	1	0	0
Other engineering	2	2	2	4	2	5	4	2	7	5
Sciences, total	136	143	147	169	176	190	210	224	221	258
Physical sciences, total	17	16	18	26	11	20	20	21	21	12
Astronomy	0	0	0	0	0	1	0	0	2	1
Chemistry	15	13	17	24	9	16	18	16	14	7
Physics	2	3	1	2	2	3	2	5	5	4
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	1	4	3	4	2	6	2	2	6	6
Mathematics	2	0	4	4	4	3	2	3	4	0
Computer sciences	0	0	3	1	1	1	1	0	4	7
Biological sciences	24	27	21	33	39	43	57	62	47	66
Agricultural sciences	4	2	3	6	3	4	5	12	5	4
Psychology	63	55	63	57	70	78	86	90	97	120
Social sciences	25	39	32	38	46	35	37	34	37	43
Non-S&E, total	185	159	163	210	223	222	234	282	290	269
Health	8	6	7	15	9	9	16	18	15	22
Humanities[1]	52	55	49	75	72	63	73	89	82	90
Education	115	92	98	105	124	132	128	159	167	130
Professional/other	10	6	9	15	18	18	17	16	26	27
Grand total, all fields	326	308	318	388	409	427	456	512	522	541
	U.S. citizens and permanent residents, female, Puerto Rican									
Science and engineering, total	33	38	39	48	47	49	42	59	63	68
Engineering, total	1	2	1	2	2	3	2	0	2	5
Chemical	0	0	0	0	1	0	0	0	1	2
Civil	0	1	0	0	0	0	1	0	0	0
Electrical	0	0	0	1	0	1	1	0	0	0
Mechanical	0	0	1	0	0	1	0	0	0	0
Other engineering	1	1	0	1	1	1	0	0	1	3
Sciences, total	32	36	38	46	45	46	40	59	61	63
Physical sciences, total	9	7	4	10	6	6	5	7	9	4
Astronomy	0	0	0	0	0	0	0	0	1	0
Chemistry	9	6	4	10	5	5	5	6	8	3
Physics	0	1	0	0	1	1	0	1	0	1
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	0	0	0	1	0	0	0	0	1	0
Mathematics	2	0	3	0	0	1	0	0	1	0
Computer sciences	0	0	0	0	0	0	1	0	0	1
Biological sciences	7	10	4	10	11	11	11	14	9	18
Agricultural sciences	3	0	2	1	0	0	3	3	0	1
Psychology	7	14	16	15	14	19	11	30	31	33
Social sciences	4	5	9	9	14	9	9	5	10	6
Non-S&E, total	52	48	51	58	60	70	69	75	86	69
Health	3	2	3	6	1	1	3	4	5	5
Humanities[1]	11	14	12	20	19	12	18	22	16	22
Education	33	29	35	30	36	53	45	45	50	34
Professional/other	5	3	1	2	4	4	3	4	15	8
Grand total, all fields	85	86	90	106	107	119	111	134	149	137

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	U.S. citizens and permanent residents, female, Mexican American									
Science and engineering, total	27	35	38	37	42	41	49	58	61	54
Engineering, total	1	0	5	2	2	0	2	2	1	3
Chemical	0	0	3	0	1	0	0	0	1	1
Civil	0	0	0	1	0	0	0	0	0	0
Electrical	0	0	1	0	0	0	0	0	0	1
Mechanical	0	0	0	1	1	0	0	0	0	0
Other engineering	1	0	1	0	0	0	2	2	0	1
Sciences, total	26	35	33	35	40	41	47	56	60	51
Physical sciences, total	1	1	2	3	3	2	3	4	4	3
Astronomy	0	0	0	0	0	0	0	0	1	0
Chemistry	0	1	2	3	2	2	2	3	2	2
Physics	1	0	0	0	1	0	1	1	1	1
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	0	2	0	1	0	2	0	0	1	2
Mathematics	0	0	0	2	2	0	1	1	2	0
Computer sciences	0	0	0	0	0	0	0	0	2	0
Biological sciences	4	2	3	7	7	13	11	13	11	12
Agricultural sciences	0	2	0	1	1	1	1	2	1	1
Psychology	16	19	21	14	15	18	26	23	33	20
Social sciences	5	9	7	7	12	5	5	13	6	13
Non-S&E, total	45	42	37	35	58	53	71	89	70	73
Health	2	1	2	6	3	5	5	3	5	4
Humanities[1]	4	9	10	8	13	10	16	19	13	20
Education	37	30	24	19	39	32	44	64	51	41
Professional/other	2	2	1	2	3	6	6	3	1	8
Grand total, all fields	72	77	75	72	100	94	120	147	131	127
	U.S. citizens and permanent residents, female, other Hispanic									
Science and engineering, total	81	76	78	93	97	115	131	113	108	150
Engineering, total	3	4	2	5	6	12	8	4	8	6
Chemical	3	0	1	1	2	4	3	0	0	3
Civil	0	0	0	1	2	1	1	3	1	0
Electrical	0	2	0	0	0	2	2	0	1	2
Mechanical	0	1	0	0	1	1	0	1	0	0
Other engineering	0	1	1	3	1	4	2	0	6	1
Sciences, total	78	72	76	88	91	103	123	109	100	144
Physical sciences, total	7	8	12	13	2	12	12	10	8	5
Astronomy	0	0	0	0	0	1	0	0	0	1
Chemistry	6	6	11	11	2	9	11	7	4	2
Physics	1	2	1	2	0	2	1	3	4	2
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	1	2	3	2	2	4	2	2	4	4
Mathematics	0	0	1	2	2	2	1	2	1	0
Computer sciences	0	0	3	1	1	1	0	0	2	6
Biological sciences	13	15	14	16	21	19	35	35	27	36
Agricultural sciences	1	0	1	4	2	3	1	7	4	2
Psychology	40	22	26	28	41	41	49	37	33	67
Social sciences	16	25	16	22	20	21	23	16	21	24
Non-S&E, total	88	69	75	117	105	99	94	118	134	127
Health	3	3	2	3	5	3	8	11	5	13
Humanities[1]	37	32	27	47	40	41	39	48	53	48
Education	45	33	39	56	49	47	39	50	66	55
Professional/other	3	1	7	11	11	8	8	9	10	11
Grand total, all fields	169	145	153	210	202	214	225	231	242	277

See explanatory information, if any, and SOURCE at end of table.

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Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	U.S. citizens and permanent residents, female, white									
Science and engineering, total	3,830	4,028	4,288	4,522	4,739	4,703	5,012	5,158	5,222	5,353
Engineering, total	144	163	224	226	235	240	261	305	320	347
Chemical	43	45	52	48	45	59	51	48	60	69
Civil	9	12	34	29	16	19	25	46	34	31
Electrical	12	22	27	39	34	40	49	54	66	67
Mechanical	11	16	17	19	30	19	32	26	25	39
Other engineering	69	68	94	91	110	103	104	131	135	141
Sciences, total	3,686	3,865	4,064	4,296	4,504	4,463	4,751	4,853	4,902	5,006
Physical sciences, total	334	339	374	385	383	399	388	408	447	431
Astronomy	9	12	11	16	6	11	21	19	19	30
Chemistry	271	277	316	315	313	318	299	307	351	308
Physics	53	42	46	48	61	66	66	80	74	91
Other physical sciences	1	8	1	6	3	4	2	2	3	2
Earth, atmospheric, & ocean sciences	84	100	110	109	142	132	110	123	108	109
Mathematics	61	59	88	79	84	93	124	118	126	105
Computer sciences	45	40	67	80	73	69	83	75	104	61
Biological sciences	995	1,114	1,120	1,154	1,170	1,221	1,311	1,349	1,347	1,401
Agricultural sciences	109	110	149	146	123	129	115	120	104	137
Psychology	1,346	1,351	1,388	1,573	1,661	1,558	1,711	1,701	1,745	1,836
Social sciences	712	752	768	770	868	862	909	959	921	926
Non-S&E, total	4,682	4,637	4,854	5,196	5,293	5,643	5,692	5,878	5,963	6,104
Health	362	427	489	459	521	558	592	609	601	611
Humanities [1]	1,071	1,103	1,097	1,261	1,305	1,432	1,503	1,556	1,700	1,754
Education	2,718	2,645	2,723	2,871	2,887	3,054	2,973	3,076	2,995	3,110
Professional/other	531	462	545	605	580	599	624	637	667	629
Grand total, all fields	8,512	8,665	9,142	9,718	10,032	10,346	10,704	11,036	11,185	11,457
	U.S. citizens									
Science and engineering, total	12,966	13,368	13,468	14,167	14,629	14,559	14,932	15,166	15,487	15,621
Engineering, total	1,558	1,780	1,864	1,957	2,086	2,109	2,228	2,215	2,386	2,591
Chemical	294	358	382	342	348	318	324	293	291	318
Civil	162	187	188	180	173	164	168	203	206	212
Electrical	320	398	440	491	554	597	630	634	683	705
Mechanical	241	256	259	299	297	352	347	359	383	436
Other engineering	541	581	595	645	714	678	759	726	823	920
Sciences, total	11,408	11,588	11,604	12,210	12,543	12,450	12,704	12,951	13,101	13,030
Physical sciences, total	2,095	2,119	1,984	2,169	2,120	2,157	2,093	2,198	2,137	2,075
Astronomy	72	97	78	92	84	100	106	103	120	137
Chemistry	1,381	1,378	1,298	1,398	1,351	1,328	1,272	1,291	1,238	1,168
Physics	627	626	597	660	671	709	704	789	764	761
Other physical sciences	15	18	11	19	14	20	11	15	15	9
Earth, atmospheric, & ocean sciences	410	493	518	516	592	506	463	507	478	462
Mathematics	345	342	393	375	463	454	496	504	554	488
Computer sciences	243	284	338	348	388	422	425	426	484	421
Biological sciences	2,981	3,130	3,118	3,191	3,314	3,328	3,449	3,422	3,494	3,547
Agricultural sciences	584	539	606	630	564	511	457	519	492	473
Psychology	2,747	2,668	2,683	2,919	2,953	2,900	3,071	3,052	3,083	3,122
Social sciences	2,003	2,013	1,964	2,062	2,149	2,172	2,250	2,323	2,379	2,442
Non-S&E, total	10,018	9,922	9,933	10,738	10,944	11,451	11,517	11,981	12,253	12,120
Health	606	657	729	721	779	809	879	961	938	933
Humanities [1]	2,509	2,609	2,530	2,899	2,975	3,211	3,274	3,486	3,747	3,726
Education	5,493	5,300	5,246	5,634	5,614	5,852	5,791	5,864	5,777	5,866
Professional/other	1,410	1,356	1,428	1,484	1,576	1,579	1,573	1,670	1,791	1,595
Grand total, all fields	22,984	23,290	23,401	24,905	25,573	26,010	26,449	27,147	27,740	27,741

See explanatory information, if any, and SOURCE at end of table

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	U.S. citizens, American Indian/Alaskan Native									
Science and engineering, total	53	44	53	43	56	69	43	64	69	95
Engineering, total	7	4	7	4	6	11	2	6	10	14
Chemical	1	2	1	0	1	1	1	1	2	1
Civil	1	1	1	2	1	1	0	0	0	2
Electrical	3	0	0	0	2	4	0	1	2	2
Mechanical	1	1	0	0	1	1	0	0	2	3
Other engineering	1	0	5	2	1	4	1	4	4	6
Sciences, total	46	40	46	39	50	58	41	58	59	81
Physical sciences, total	7	6	10	3	10	12	5	6	9	6
Astronomy	0	0	2	0	0	0	1	0	0	0
Chemistry	6	5	5	3	9	6	2	4	7	4
Physics	1	1	3	0	1	6	2	2	2	2
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	0	2	6	1	3	1	4	1	0	2
Mathematics	0	2	0	1	0	2	1	2	2	1
Computer sciences	3	1	2	0	1	2	1	1	0	4
Biological sciences	11	6	7	4	10	13	7	16	15	21
Agricultural sciences	2	6	2	4	4	0	1	1	2	5
Psychology	16	7	11	19	13	15	15	12	14	18
Social sciences	7	10	8	7	9	13	7	19	17	24
Non-S&E, total	62	50	41	54	74	80	77	79	80	91
Health	3	5	3	1	5	5	6	6	9	4
Humanities[1]	10	4	7	6	10	18	10	20	18	18
Education	41	36	25	37	55	50	51	37	41	60
Professional/other	8	5	6	10	4	7	10	16	12	9
Grand total, all fields	115	94	94	97	130	149	120	143	149	186
	U.S. citizens, Asian/Pacific Islander									
Science and engineering, total	447	454	494	488	599	651	712	736	895	835
Engineering, total	135	141	174	157	187	214	217	202	255	271
Chemical	24	32	40	26	27	25	26	27	27	27
Civil	14	8	15	8	11	12	10	7	15	17
Electrical	41	45	48	51	67	95	86	97	92	108
Mechanical	25	22	25	27	26	35	34	28	39	40
Other engineering	31	34	46	45	56	47	61	43	82	79
Sciences, total	312	313	320	331	412	437	495	534	640	564
Physical sciences, total	67	67	75	86	86	108	121	122	148	108
Astronomy	1	2	0	1	0	2	3	4	4	5
Chemistry	49	48	42	54	63	65	76	70	91	56
Physics	17	17	33	31	23	41	42	47	53	47
Other physical sciences	0	0	0	0	0	0	0	1	0	0
Earth, atmospheric, & ocean sciences	9	8	12	4	7	14	6	7	8	8
Mathematics	18	17	13	11	23	21	28	18	25	23
Computer sciences	10	20	18	10	32	37	27	33	42	37
Biological sciences	106	101	122	116	160	134	190	194	229	237
Agricultural sciences	17	9	7	11	9	13	9	14	10	13
Psychology	39	37	38	44	46	47	52	81	84	77
Social sciences	46	54	35	49	49	63	62	65	94	61
Non-S&E, total	96	160	139	153	190	197	179	214	245	256
Health	19	16	11	26	23	32	17	36	23	39
Humanities[1]	22	36	41	30	43	46	53	59	85	82
Education	41	82	57	67	85	80	85	81	82	92
Professional/other	14	26	30	30	39	39	24	38	55	43
Grand total, all fields	543	614	633	641	789	848	891	950	1,140	1,091

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	U.S. citizens, black									
Science and engineering, total	245	275	298	292	368	323	376	391	471	492
Engineering, total	12	19	24	28	43	32	41	44	54	59
Chemical	4	4	2	5	4	8	4	6	2	10
Civil	1	0	2	0	8	0	3	8	7	6
Electrical	0	7	8	7	16	12	13	14	20	17
Mechanical	2	0	5	5	3	3	2	4	8	9
Other engineering	5	8	7	11	12	9	19	12	17	17
Sciences, total	233	256	274	264	325	291	335	347	417	433
Physical sciences, total	16	29	25	19	25	21	29	33	37	46
Astronomy	2	0	0	1	0	1	2	0	1	0
Chemistry	11	18	20	14	19	13	19	23	27	34
Physics	3	11	5	4	6	6	7	9	9	12
Other physical sciences	0	0	0	0	0	1	1	1	0	0
Earth, atmospheric, & ocean sciences	1	2	3	3	2	5	2	3	2	3
Mathematics	10	2	6	4	9	4	5	9	4	8
Computer sciences	2	1	1	1	5	4	5	7	9	12
Biological sciences	45	36	46	37	51	47	64	67	91	82
Agricultural sciences	7	8	6	9	6	6	5	10	9	15
Psychology	88	101	96	111	126	101	117	112	145	146
Social sciences	64	77	91	80	101	103	108	106	120	121
Non-S&E, total	526	543	524	609	642	648	735	710	838	823
Health	25	26	24	25	35	35	52	41	55	42
Humanities[1]	65	67	63	69	84	84	82	94	96	107
Education	383	373	390	456	437	467	516	486	585	582
Professional/other	53	77	47	59	86	62	85	89	102	92
Grand total, all fields	771	818	822	901	1,010	971	1,111	1,101	1,309	1,315
	U.S. citizens, Hispanic									
Science and engineering, total	308	331	313	390	410	433	444	463	486	531
Engineering, total	24	43	33	39	48	57	56	49	61	86
Chemical	7	3	5	7	10	10	10	5	12	15
Civil	1	10	4	6	5	6	7	7	7	2
Electrical	4	10	10	9	11	14	16	16	14	26
Mechanical	4	5	3	3	8	10	3	7	5	11
Other engineering	8	15	11	14	14	17	20	14	23	32
Sciences, total	284	288	280	351	362	376	388	414	425	445
Physical sciences, total	48	58	52	63	54	58	65	75	61	50
Astronomy	0	2	1	2	1	4	1	2	3	1
Chemistry	40	44	40	50	39	34	43	49	38	31
Physics	8	12	11	11	14	20	21	24	20	18
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	3	7	6	11	12	13	8	7	7	13
Mathematics	9	3	8	7	6	10	9	12	12	8
Computer sciences	4	2	4	4	11	7	5	5	6	12
Biological sciences	52	61	58	73	79	90	93	111	104	109
Agricultural sciences	12	13	12	14	7	9	14	16	10	9
Psychology	92	89	87	100	113	122	120	128	137	167
Social sciences	64	55	53	79	80	67	74	60	88	77
Non-S&E, total	309	264	269	331	321	345	390	421	433	419
Health	11	11	10	17	12	12	19	20	29	31
Humanities[1]	89	86	77	104	105	98	122	129	122	135
Education	185	151	158	179	175	200	213	226	235	204
Professional/other	24	16	24	31	29	35	36	46	47	49
Grand total, all fields	617	595	582	721	731	778	834	884	919	950

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	U.S. citizens, Puerto Rican									
Science and engineering, total	86	96	93	115	99	120	112	131	137	142
Engineering, total	4	13	7	6	9	13	10	10	13	22
Chemical	1	0	1	2	2	3	2	2	4	4
Civil	0	6	1	1	1	1	1	1	1	1
Electrical	2	2	1	2	0	3	5	3	3	4
Mechanical	0	1	3	0	2	1	1	1	1	3
Other engineering	1	4	1	1	4	5	1	3	4	10
Sciences, total	82	83	86	109	90	107	102	121	124	120
Physical sciences, total	26	23	20	24	17	20	17	26	21	12
Astronomy	0	0	1	1	0	1	0	0	1	0
Chemistry	26	19	16	20	14	14	14	19	17	9
Physics	0	4	3	3	3	5	3	7	3	3
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	0	0	0	5	0	3	1	0	2	3
Mathematics	6	1	4	2	0	2	1	1	1	3
Computer sciences	1	0	0	2	3	1	1	4	0	5
Biological sciences	18	20	18	24	23	27	27	28	30	32
Agricultural sciences	6	2	7	5	0	3	10	5	3	4
Psychology	15	26	21	26	20	35	24	43	44	48
Social sciences	10	11	16	21	27	16	21	14	23	13
Non-S&E, total	93	78	83	95	92	109	120	126	132	109
Health	3	4	4	6	3	4	3	6	12	7
Humanities[1]	29	23	22	28	30	22	36	38	30	38
Education	52	44	52	56	52	76	70	68	69	51
Professional/other	9	7	5	5	7	7	11	14	21	13
Grand total, all fields	179	174	176	210	191	229	232	257	269	251
	U.S. citizens, Mexican American									
Science and engineering, total	75	83	82	96	117	110	103	134	138	142
Engineering, total	6	8	10	12	14	10	10	14	14	26
Chemical	1	0	1	2	4	1	1	1	3	4
Civil	1	0	1	2	2	2	0	1	3	0
Electrical	0	1	2	4	3	3	2	4	3	9
Mechanical	1	1	0	2	3	2	0	2	1	4
Other engineering	3	6	6	2	2	2	7	6	4	9
Sciences, total	69	75	72	84	103	100	93	120	124	116
Physical sciences, total	9	11	11	11	15	9	9	20	13	20
Astronomy	0	1	0	0	0	0	0	1	1	1
Chemistry	4	9	10	11	12	6	6	16	8	14
Physics	5	1	1	0	3	3	3	3	4	5
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	2	4	1	2	4	6	1	4	3	5
Mathematics	0	0	1	3	3	3	2	4	5	2
Computer sciences	1	0	0	0	0	2	0	0	3	1
Biological sciences	9	10	11	20	23	21	22	29	25	28
Agricultural sciences	3	1	3	6	1	4	2	5	3	2
Psychology	27	28	30	25	34	36	40	38	47	38
Social sciences	18	21	15	17	23	19	17	20	25	20
Non-S&E, total	99	93	78	83	99	97	127	156	137	140
Health	3	3	4	7	3	5	7	3	8	6
Humanities[1]	17	20	21	17	23	22	34	39	33	39
Education	72	63	48	49	64	58	73	100	91	78
Professional/other	7	7	5	10	9	12	13	14	5	17
Grand total, all fields	174	176	160	179	216	207	230	290	275	282

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	U.S. citizens, other Hispanic									
Science and engineering, total	147	152	138	179	194	203	229	198	211	247
Engineering, total	14	22	16	21	25	34	36	25	34	38
Chemical	5	3	3	3	4	6	7	2	5	7
Civil	0	4	2	3	2	3	6	5	3	1
Electrical	2	7	7	3	8	8	9	9	8	13
Mechanical	3	3	0	1	3	7	2	4	3	4
Other engineering	4	5	4	11	8	10	12	5	15	13
Sciences, total	133	130	122	158	169	169	193	173	177	209
Physical sciences, total	13	24	21	28	22	29	39	29	27	18
Astronomy	0	1	0	1	1	3	1	1	1	0
Chemistry	10	16	14	19	13	14	23	14	13	8
Physics	3	7	7	8	8	12	15	14	13	10
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	1	3	5	4	8	4	6	3	2	5
Mathematics	3	2	3	2	3	5	6	7	6	3
Computer sciences	2	2	4	2	8	4	4	1	3	6
Biological sciences	25	31	29	29	33	42	44	54	49	49
Agricultural sciences	3	10	2	3	6	2	2	6	4	3
Psychology	50	35	36	49	59	51	56	47	48	81
Social sciences	36	23	22	41	30	32	36	26	40	44
Non-S&E, total	117	93	108	153	130	139	143	139	164	170
Health	5	4	2	4	6	3	9	11	9	18
Humanities[1]	43	43	34	59	52	54	52	52	59	58
Education	61	44	58	74	59	66	70	58	75	75
Professional/other	8	2	14	16	13	16	12	18	21	19
Grand total, all fields	264	245	246	332	324	342	372	337	375	417
	U.S. citizens, white									
Science and engineering, total	11,612	12,003	12,049	12,694	12,839	12,851	13,211	13,356	13,373	13,450
Engineering, total	1,331	1,531	1,583	1,690	1,707	1,750	1,892	1,886	1,956	2,123
Chemical	252	309	328	299	300	267	282	246	242	261
Civil	140	162	163	162	143	142	147	181	175	184
Electrical	256	324	360	413	430	457	507	503	538	541
Mechanical	203	225	218	261	244	300	303	316	319	369
Other engineering	480	511	514	555	590	584	653	640	682	768
Sciences, total	10,281	10,472	10,466	11,004	11,132	11,101	11,319	11,470	11,417	11,327
Physical sciences, total	1,902	1,900	1,777	1,939	1,896	1,917	1,848	1,944	1,845	1,825
Astronomy	68	90	73	86	81	91	97	94	109	127
Chemistry	1,243	1,236	1,167	1,249	1,201	1,192	1,119	1,139	1,064	1,028
Physics	577	556	526	586	601	616	623	698	659	661
Other physical sciences	14	18	11	18	13	18	9	13	13	9
Earth, atmospheric, & ocean sciences	381	462	484	488	546	469	440	486	452	430
Mathematics	295	308	351	346	403	407	445	455	507	440
Computer sciences	215	253	296	325	330	363	379	375	419	342
Biological sciences	2,697	2,877	2,832	2,909	2,965	2,998	3,056	3,005	3,023	3,050
Agricultural sciences	541	493	560	582	527	475	426	471	456	424
Psychology	2,476	2,404	2,423	2,599	2,616	2,580	2,751	2,694	2,679	2,698
Social sciences	1,774	1,775	1,743	1,816	1,849	1,892	1,974	2,040	2,036	2,118
Non-S&E, total	8,856	8,783	8,845	9,477	9,586	10,060	10,050	10,459	10,547	10,406
Health	536	596	675	648	691	714	782	846	807	805
Humanities[1]	2,269	2,375	2,288	2,649	2,685	2,927	2,969	3,150	3,376	3,338
Education	4,758	4,596	4,576	4,842	4,820	5,007	4,897	4,989	4,801	4,879
Professional/other	1,293	1,216	1,306	1,338	1,390	1,412	1,402	1,474	1,563	1,384
Grand total, all fields	20,468	20,786	20,894	22,171	22,425	22,911	23,261	23,815	23,920	23,856

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	U.S. citizens, male									
Science and engineering, total	8,801	9,013	8,821	9,274	9,391	9,397	9,429	9,463	9,598	9,569
Engineering, total	1,409	1,602	1,615	1,709	1,807	1,826	1,932	1,872	2,012	2,176
Chemical	250	312	322	288	297	250	265	236	221	235
Civil	153	174	151	151	152	144	138	155	170	175
Electrical	306	370	411	446	510	542	573	570	604	623
Mechanical	231	240	240	276	263	329	314	327	355	391
Other engineering	469	506	491	548	585	561	642	584	662	752
Sciences, total	7,392	7,411	7,206	7,565	7,584	7,571	7,497	7,591	7,586	7,393
Physical sciences, total	1,733	1,750	1,582	1,747	1,708	1,710	1,647	1,745	1,618	1,608
Astronomy	63	84	67	76	77	87	86	83	99	106
Chemistry	1,085	1,073	956	1,046	1,015	971	920	946	829	835
Physics	571	582	549	613	605	636	633	703	677	660
Other physical sciences	14	11	10	12	11	16	8	13	13	7
Earth, atmospheric, & ocean sciences	328	384	404	398	444	368	351	382	366	348
Mathematics	280	283	300	293	370	357	372	382	422	383
Computer sciences	193	245	266	268	305	353	343	349	368	344
Biological sciences	1,904	1,959	1,928	1,958	2,024	1,999	2,000	1,930	2,006	1,962
Agricultural sciences	468	420	450	483	436	377	333	387	380	328
Psychology	1,259	1,190	1,146	1,195	1,106	1,176	1,202	1,143	1,093	1,017
Social sciences	1,227	1,180	1,130	1,223	1,191	1,231	1,249	1,273	1,333	1,403
Non-S&E, total	4,773	4,711	4,575	4,891	4,997	5,122	5,088	5,272	5,369	5,131
Health	207	196	207	221	221	203	226	283	263	247
Humanities[1]	1,371	1,450	1,390	1,580	1,606	1,728	1,699	1,837	1,939	1,854
Education	2,359	2,235	2,132	2,272	2,255	2,263	2,282	2,200	2,149	2,149
Professional/other	836	830	846	818	915	928	881	952	1,018	881
Grand total, all fields	13,574	13,724	13,396	14,165	14,388	14,519	14,517	14,735	14,967	14,700
	U.S. citizens, male, American Indian/Alaskan Native									
Science and engineering, total	32	29	33	25	37	42	25	40	44	62
Engineering, total	7	4	5	4	4	8	2	4	10	12
Chemical	1	2	1	0	0	1	1	1	2	1
Civil	1	1	0	2	1	0	0	0	0	1
Electrical	3	0	0	0	1	3	0	1	2	1
Mechanical	1	1	0	0	1	1	0	0	2	3
Other engineering	1	0	4	2	1	3	1	2	4	6
Sciences, total	25	25	28	21	33	34	23	36	34	50
Physical sciences, total	5	5	10	3	8	10	3	5	6	5
Astronomy	0	0	2	0	0	0	1	0	0	0
Chemistry	4	5	5	3	7	4	1	4	4	3
Physics	1	0	3	0	1	6	1	1	2	2
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	0	1	4	0	2	1	4	1	0	2
Mathematics	0	2	0	1	0	1	1	2	1	1
Computer sciences	2	1	1	0	1	2	0	0	0	2
Biological sciences	7	4	4	3	6	8	5	11	10	12
Agricultural sciences	2	4	1	4	4	0	1	1	2	2
Psychology	4	3	3	6	5	6	6	5	6	9
Social sciences	5	5	5	4	7	6	3	11	9	17
Non-S&E, total	30	23	16	27	37	40	35	31	38	40
Health	1	1	0	1	3	3	0	1	2	1
Humanities[1]	6	0	2	4	3	12	7	12	10	9
Education	18	18	10	16	29	20	21	10	17	22
Professional/other	5	4	4	6	2	5	7	8	9	8
Grand total, all fields	62	52	49	52	74	82	60	71	82	102

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	U.S. citizens, male, Asian/Pacific Islander									
Science and engineering, total	323	337	371	359	407	450	479	492	574	511
Engineering, total	124	132	151	137	160	181	193	171	203	221
Chemical	21	29	31	19	20	18	22	20	16	17
Civil	13	8	13	7	10	11	10	7	13	11
Electrical	39	42	43	47	64	83	79	86	80	95
Mechanical	25	22	24	25	23	33	33	23	35	36
Other engineering	26	31	40	39	43	36	49	35	59	62
Sciences, total	199	205	220	222	247	269	286	321	371	290
Physical sciences, total	52	52	62	67	66	72	79	88	99	75
Astronomy	1	2	0	1	0	1	2	4	3	3
Chemistry	36	34	34	41	48	36	39	43	52	33
Physics	15	16	28	25	18	35	38	40	44	39
Other physical sciences	0	0	0	0	0	0	0	1	0	0
Earth, atmospheric, & ocean sciences	8	6	10	3	4	11	4	6	7	5
Mathematics	14	13	12	8	18	17	18	14	18	15
Computer sciences	6	19	14	9	25	34	23	29	34	28
Biological sciences	61	64	75	77	91	71	102	114	128	107
Agricultural sciences	14	5	4	9	6	8	5	12	5	6
Psychology	15	13	20	19	13	17	20	20	31	20
Social sciences	29	33	23	30	24	39	35	38	49	34
Non-S&E, total	46	77	75	68	76	81	74	99	96	103
Health	11	9	6	12	10	9	7	15	7	16
Humanities[1]	8	16	24	18	17	22	17	31	28	29
Education	18	34	23	19	26	22	34	28	27	31
Professional/other	9	18	22	19	23	28	16	25	34	27
Grand total, all fields	369	414	446	427	483	531	553	591	670	614
	U.S. citizens, male, black									
Science and engineering, total	123	150	148	153	190	162	180	192	219	254
Engineering, total	11	15	21	23	35	26	30	31	41	40
Chemical	4	3	1	3	3	7	1	2	1	5
Civil	1	0	2	0	6	0	1	6	4	5
Electrical	0	5	8	6	14	10	11	11	16	12
Mechanical	2	0	5	5	2	3	2	3	8	6
Other engineering	4	7	5	9	10	6	15	9	12	12
Sciences, total	112	135	127	130	155	136	150	161	178	214
Physical sciences, total	13	22	18	13	21	16	20	21	20	34
Astronomy	2	0	0	1	0	0	2	0	1	0
Chemistry	9	12	13	8	15	9	11	15	11	24
Physics	2	10	5	4	6	6	7	5	8	10
Other physical sciences	0	0	0	0	0	1	0	1	0	0
Earth, atmospheric, & ocean sciences	0	2	2	1	1	4	2	2	2	1
Mathematics	8	2	4	3	5	4	4	6	3	6
Computer sciences	1	1	0	1	1	3	2	5	5	9
Biological sciences	23	18	23	16	25	25	34	24	52	46
Agricultural sciences	4	4	5	8	5	5	3	7	4	15
Psychology	30	46	35	42	42	25	43	40	37	39
Social sciences	33	40	40	46	55	54	42	56	55	64
Non-S&E, total	195	167	180	198	231	234	261	219	271	281
Health	7	3	4	7	13	11	15	11	14	10
Humanities[1]	28	35	29	35	37	42	44	42	42	47
Education	136	104	129	139	149	148	169	131	177	185
Professional/other	24	25	18	17	32	33	33	35	38	39
Grand total, all fields	318	317	328	351	421	396	441	411	490	535

See explanatory information, if any, and SOURCE at end of table.

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Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	U.S. citizens, male, Hispanic									
Science and engineering, total	182	202	180	237	241	263	256	262	282	295
Engineering, total	21	37	27	33	38	46	45	44	51	73
Chemical	6	3	3	7	6	8	7	5	10	10
Civil	1	9	4	5	3	5	5	5	6	2
Electrical	4	8	9	8	11	12	13	16	13	23
Mechanical	4	4	2	2	6	8	3	6	5	11
Other engineering	6	13	9	11	12	13	17	12	17	27
Sciences, total	161	165	153	204	203	217	211	218	231	222
Physical sciences, total	33	45	37	41	44	43	48	58	42	41
Astronomy	0	2	1	2	1	3	1	2	1	1
Chemistry	27	33	25	30	31	23	29	36	24	25
Physics	6	10	11	9	12	17	19	20	17	15
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	3	3	4	7	11	9	6	5	4	9
Mathematics	7	3	4	4	3	7	8	9	9	8
Computer sciences	4	2	1	3	10	6	4	5	2	7
Biological sciences	33	39	43	45	44	55	47	61	68	58
Agricultural sciences	8	12	9	11	6	7	9	9	9	6
Psychology	31	36	27	47	47	52	42	42	43	51
Social sciences	42	25	28	46	38	38	46	29	54	42
Non-S&E, total	150	119	127	143	129	147	167	176	178	183
Health	3	5	3	2	4	4	4	3	15	11
Humanities[1]	51	38	41	44	49	51	55	67	59	65
Education	82	65	68	80	63	74	88	76	82	83
Professional/other	14	10	15	17	13	18	20	30	22	24
Grand total, all fields	332	321	307	380	370	410	423	438	460	478
	U.S. citizens, male, Puerto Rican									
Science and engineering, total	53	58	54	67	52	71	70	72	74	74
Engineering, total	3	11	6	4	7	10	8	10	11	17
Chemical	1	0	1	2	1	3	2	2	3	2
Civil	0	5	1	1	1	1	0	1	1	1
Electrical	2	2	1	1	0	2	4	3	3	4
Mechanical	0	1	2	0	2	0	1	1	1	3
Other engineering	0	3	1	0	3	4	1	3	3	7
Sciences, total	50	47	48	63	45	61	62	62	63	57
Physical sciences, total	17	16	16	14	11	14	12	19	12	8
Astronomy	0	0	1	1	0	1	0	0	0	0
Chemistry	17	13	12	10	8	9	9	13	9	6
Physics	0	3	3	3	2	4	3	6	3	2
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	0	0	0	4	0	3	1	0	1	3
Mathematics	4	1	1	2	0	1	1	1	0	3
Computer sciences	1	0	0	2	3	1	0	4	0	4
Biological sciences	11	10	14	14	12	16	16	14	21	14
Agricultural sciences	3	2	5	4	0	3	7	2	3	3
Psychology	8	12	5	11	6	16	13	13	13	15
Social sciences	6	6	7	12	13	7	12	9	13	7
Non-S&E, total	41	30	32	37	32	39	51	51	46	40
Health	0	2	1	0	2	3	0	2	7	2
Humanities[1]	18	9	10	8	11	10	18	16	14	16
Education	19	15	17	26	16	23	25	23	19	17
Professional/other	4	4	4	3	3	3	8	10	6	5
Grand total, all fields	94	88	86	104	84	110	121	123	120	114

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	U.S. citizens, male, Mexican American									
Science and engineering, total	48	51	48	61	76	72	61	80	79	89
Engineering, total	5	8	7	10	12	10	9	12	13	23
Chemical	1	0	0	2	3	1	1	1	2	3
Civil	1	0	1	1	2	2	0	1	3	0
Electrical	0	1	1	4	3	3	2	4	3	8
Mechanical	1	1	0	1	2	2	0	2	1	4
Other engineering	2	6	5	2	2	2	6	4	4	8
Sciences, total	43	43	41	51	64	62	52	68	66	66
Physical sciences, total	8	10	9	8	12	7	7	17	9	17
Astronomy	0	1	0	0	0	0	0	1	0	1
Chemistry	4	8	8	8	10	4	5	14	6	12
Physics	4	1	1	0	2	3	2	2	3	4
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	2	2	1	1	4	4	1	4	2	3
Mathematics	0	0	1	1	1	3	2	3	3	2
Computer sciences	1	0	0	0	0	2	0	0	1	1
Biological sciences	5	9	8	13	16	10	12	16	16	16
Agricultural sciences	3	0	3	6	1	3	1	4	2	1
Psychology	11	9	10	11	19	19	16	17	14	18
Social sciences	13	13	9	11	11	14	13	7	19	8
Non-S&E, total	55	51	43	48	44	45	56	70	68	70
Health	1	2	2	1	0	0	2	0	3	2
Humanities[1]	13	11	12	9	11	13	18	22	21	21
Education	36	33	25	30	27	26	29	37	40	37
Professional/other	5	5	4	8	6	6	7	11	4	10
Grand total, all fields	103	102	91	109	120	117	117	150	147	159
	U.S. citizens, male, other Hispanic									
Science and engineering, total	81	93	78	109	113	120	125	110	129	132
Engineering, total	13	18	14	19	19	26	28	22	27	33
Chemical	4	3	2	3	2	4	4	2	5	5
Civil	0	4	2	3	0	2	5	3	2	1
Electrical	2	5	7	3	8	7	7	9	7	11
Mechanical	3	2	0	1	2	6	2	3	3	4
Other engineering	4	4	3	9	7	7	10	5	10	12
Sciences, total	68	75	64	90	94	94	97	88	102	99
Physical sciences, total	8	19	12	19	21	22	30	22	21	16
Astronomy	0	1	0	1	1	2	1	1	1	0
Chemistry	6	12	5	12	12	10	15	9	9	7
Physics	2	6	7	6	8	10	14	12	11	9
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	1	1	3	2	7	2	4	1	1	3
Mathematics	3	2	2	1	2	3	5	5	6	3
Computer sciences	2	2	1	1	7	3	4	1	1	2
Biological sciences	17	20	21	18	16	29	19	31	31	28
Agricultural sciences	2	10	1	1	5	1	1	3	4	2
Psychology	12	15	12	25	22	17	13	12	16	18
Social sciences	23	6	12	23	14	17	21	13	22	27
Non-S&E, total	54	38	52	58	53	63	60	55	64	73
Health	2	2	0	1	2	1	2	1	5	7
Humanities[1]	20	18	19	27	27	28	19	29	24	28
Education	27	17	26	24	20	25	34	16	23	29
Professional/other	5	1	7	6	4	9	5	9	12	9
Grand total, all fields	135	131	130	167	166	183	185	165	193	205

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	U.S. citizens, male, white									
Science and engineering, total	7,900	8,087	7,881	8,291	8,237	8,293	8,370	8,356	8,327	8,288
Engineering, total	1,199	1,376	1,371	1,474	1,486	1,523	1,644	1,595	1,660	1,799
Chemical	212	268	280	254	262	211	233	201	186	198
Civil	132	151	131	135	128	125	122	137	145	155
Electrical	244	304	337	374	397	419	462	453	479	481
Mechanical	193	210	201	242	217	281	272	291	295	332
Other engineering	418	443	422	469	482	487	555	513	555	633
Sciences, total	6,701	6,711	6,510	6,817	6,751	6,770	6,726	6,761	6,667	6,489
Physical sciences, total	1,580	1,570	1,412	1,571	1,524	1,535	1,473	1,557	1,420	1,419
Astronomy	59	78	62	70	75	81	78	75	91	98
Chemistry	982	964	857	942	896	885	828	843	732	738
Physics	526	517	483	547	543	555	560	628	586	576
Other physical sciences	13	11	10	12	10	14	7	11	11	7
Earth, atmospheric, & ocean sciences	301	363	377	379	409	339	332	366	346	326
Mathematics	238	253	268	272	324	319	334	344	388	347
Computer sciences	172	215	235	248	260	299	307	305	320	286
Biological sciences	1,727	1,797	1,745	1,776	1,825	1,802	1,782	1,700	1,722	1,706
Agricultural sciences	437	387	415	441	406	349	314	353	357	293
Psychology	1,159	1,078	1,049	1,059	980	1,059	1,081	1,022	967	892
Social sciences	1,087	1,048	1,009	1,071	1,023	1,068	1,103	1,114	1,147	1,220
Non-S&E, total	4,269	4,257	4,106	4,398	4,447	4,549	4,498	4,699	4,725	4,456
Health	180	177	191	198	186	171	198	250	222	206
Humanities[1]	1,246	1,333	1,257	1,451	1,466	1,574	1,546	1,662	1,764	1,679
Education	2,071	1,987	1,882	1,999	1,968	1,977	1,958	1,937	1,833	1,803
Professional/other	772	760	776	750	827	827	796	850	906	768
Grand total, all fields	12,169	12,344	11,987	12,689	12,684	12,842	12,868	13,055	13,052	12,744
	U.S. citizens, female									
Science and engineering, total	4,165	4,355	4,647	4,893	5,238	5,162	5,503	5,703	5,889	6,052
Engineering, total	149	178	249	248	279	283	296	343	374	415
Chemical	44	46	60	54	51	68	59	57	70	83
Civil	9	13	37	29	21	20	30	48	36	37
Electrical	14	28	29	45	44	55	57	64	79	82
Mechanical	10	16	19	23	34	23	33	32	28	45
Other engineering	72	75	104	97	129	117	117	142	161	168
Sciences, total	4,016	4,177	4,398	4,645	4,959	4,879	5,207	5,360	5,515	5,637
Physical sciences, total	362	369	402	422	412	447	446	453	519	467
Astronomy	9	13	11	16	7	13	20	20	20	31
Chemistry	296	305	342	352	336	357	352	345	409	333
Physics	56	44	48	47	66	73	71	86	87	101
Other physical sciences	1	7	1	7	3	4	3	2	2	2
Earth, atmospheric, & ocean sciences	82	109	114	118	148	138	112	125	112	114
Mathematics	65	59	93	82	93	97	124	122	132	105
Computer sciences	50	39	72	80	83	69	82	77	116	77
Biological sciences	1,077	1,171	1,190	1,233	1,290	1,329	1,449	1,492	1,488	1,585
Agricultural sciences	116	119	156	147	128	134	124	132	112	145
Psychology	1,488	1,478	1,537	1,724	1,847	1,724	1,869	1,909	1,990	2,105
Social sciences	776	833	834	839	958	941	1,001	1,050	1,046	1,039
Non-S&E, total	5,245	5,211	5,358	5,847	5,947	6,329	6,429	6,709	6,884	6,989
Health	399	461	522	500	558	606	653	678	675	686
Humanities[1]	1,138	1,159	1,140	1,319	1,369	1,483	1,575	1,649	1,808	1,872
Education	3,134	3,065	3,114	3,362	3,359	3,589	3,509	3,664	3,628	3,717
Professional/other	574	526	582	666	661	651	692	718	773	714
Grand total, all fields	9,410	9,566	10,005	10,740	11,185	11,491	11,932	12,412	12,773	13,041

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	U.S. citizens, female, American Indian/Alaskan Native									
Science and engineering, total	21	15	20	18	19	27	18	24	25	33
Engineering, total	0	0	2	0	2	3	0	2	0	2
Chemical	0	0	0	0	1	0	0	0	0	0
Civil	0	0	1	0	0	1	0	0	0	1
Electrical	0	0	0	0	1	1	0	0	0	1
Mechanical	0	0	0	0	0	0	0	0	0	0
Other engineering	0	0	1	0	0	1	0	2	0	0
Sciences, total	21	15	18	18	17	24	18	22	25	31
Physical sciences, total	2	1	0	0	2	2	2	1	3	1
Astronomy	0	0	0	0	0	0	0	0	0	0
Chemistry	2	0	0	0	2	2	1	0	3	1
Physics	0	1	0	0	0	0	1	1	0	0
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	0	1	2	1	1	0	0	0	0	0
Mathematics	0	0	0	0	0	1	0	0	1	0
Computer sciences	1	0	1	0	0	0	1	1	0	2
Biological sciences	4	2	3	1	4	5	2	5	5	9
Agricultural sciences	0	2	1	0	0	0	0	0	0	3
Psychology	12	4	8	13	8	9	9	7	8	9
Social sciences	2	5	3	3	2	7	4	8	8	7
Non-S&E, total	32	27	25	27	37	40	42	48	42	51
Health	2	4	3	0	2	2	6	5	7	3
Humanities[1]	4	4	5	2	7	6	3	8	8	9
Education	23	18	15	21	26	30	30	27	24	38
Professional/other	3	1	2	4	2	2	3	8	3	1
Grand total, all fields	53	42	45	45	56	67	60	72	67	84
	U.S. citizens, female, Asian/Pacific Islander									
Science and engineering, total	124	117	123	129	192	201	233	244	321	324
Engineering, total	11	9	23	20	27	33	24	31	52	50
Chemical	3	3	9	7	7	7	4	7	11	10
Civil	1	0	2	1	1	1	0	0	2	6
Electrical	2	3	5	4	3	12	7	11	12	13
Mechanical	0	0	1	2	3	2	1	5	4	4
Other engineering	5	3	6	6	13	11	12	8	23	17
Sciences, total	113	108	100	109	165	168	209	213	269	274
Physical sciences, total	15	15	13	19	20	36	42	34	49	33
Astronomy	0	0	0	0	0	1	1	0	1	2
Chemistry	13	14	8	13	15	29	37	27	39	23
Physics	2	1	5	6	5	6	4	7	9	8
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	1	2	2	1	3	3	2	1	1	3
Mathematics	4	4	1	3	5	4	10	4	7	8
Computer sciences	4	1	4	1	7	3	4	4	8	9
Biological sciences	45	37	47	39	69	63	88	80	101	130
Agricultural sciences	3	4	3	2	3	5	4	2	5	7
Psychology	24	24	18	25	33	30	32	61	53	57
Social sciences	17	21	12	19	25	24	27	27	45	27
Non-S&E, total	50	83	64	85	114	116	105	115	149	153
Health	8	7	5	14	13	23	10	21	16	23
Humanities[1]	14	20	17	12	26	24	36	28	57	53
Education	23	48	34	48	59	58	51	53	55	61
Professional/other	5	8	8	11	16	11	8	13	21	16
Grand total, all fields	174	200	187	214	306	317	338	359	470	477

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	U.S. citizens, female, black									
Science and engineering, total	122	125	150	139	178	161	196	199	252	238
Engineering, total	1	4	3	5	8	6	11	13	13	19
Chemical	0	1	1	2	1	1	3	4	1	5
Civil	0	0	0	0	2	0	2	2	3	1
Electrical	0	2	0	1	2	2	2	3	4	5
Mechanical	0	0	0	0	1	0	0	1	0	3
Other engineering	1	1	2	2	2	3	4	3	5	5
Sciences, total	121	121	147	134	170	155	185	186	239	219
Physical sciences, total	3	7	7	6	4	5	9	12	17	12
Astronomy	0	0	0	0	0	1	0	0	0	0
Chemistry	2	6	7	6	4	4	8	8	16	10
Physics	1	1	0	0	0	0	0	4	1	2
Other physical sciences	0	0	0	0	0	0	1	0	0	0
Earth, atmospheric, & ocean sciences	1	0	1	2	1	1	0	1	0	2
Mathematics	2	0	2	1	4	0	1	3	1	2
Computer sciences	1	0	1	0	4	1	3	2	4	3
Biological sciences	22	18	23	21	26	22	30	43	39	36
Agricultural sciences	3	4	1	1	1	1	2	3	5	0
Psychology	58	55	61	59	84	76	74	72	108	107
Social sciences	31	37	51	34	46	49	66	50	65	57
Non-S&E, total	331	376	344	411	411	414	474	491	567	542
Health	18	23	20	18	22	24	37	30	41	32
Humanities[1]	37	32	34	34	47	42	38	52	54	60
Education	247	269	261	317	288	319	347	355	408	397
Professional/other	29	52	29	42	54	29	52	54	64	53
Grand total, all fields	453	501	494	550	589	575	670	690	819	780
	U.S. citizens, female, Hispanic									
Science and engineering, total	126	129	133	153	169	170	188	201	204	236
Engineering, total	3	6	6	6	10	11	11	5	10	13
Chemical	1	0	2	0	4	2	3	0	2	5
Civil	0	1	0	1	2	1	2	2	1	0
Electrical	0	2	1	1	0	2	3	0	1	3
Mechanical	0	1	1	1	2	2	0	1	0	0
Other engineering	2	2	2	3	2	4	3	2	6	5
Sciences, total	123	123	127	147	159	159	177	196	194	223
Physical sciences, total	15	13	15	22	10	15	16	17	19	9
Astronomy	0	0	0	0	0	1	0	0	2	0
Chemistry	13	11	15	20	8	11	14	13	14	6
Physics	2	2	0	2	2	3	2	4	3	3
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	0	4	2	4	1	4	2	2	3	4
Mathematics	2	0	4	3	3	3	1	3	3	0
Computer sciences	0	0	3	1	1	1	1	0	4	5
Biological sciences	19	22	15	28	35	35	46	50	36	51
Agricultural sciences	4	1	3	3	1	2	5	7	1	3
Psychology	61	53	60	53	66	70	78	86	94	116
Social sciences	22	30	25	33	42	29	28	31	34	35
Non-S&E, total	159	145	142	188	192	198	223	245	255	236
Health	8	5	7	15	8	8	15	17	14	20
Humanities[1]	38	48	36	60	56	47	67	62	63	70
Education	103	86	90	99	112	126	125	150	153	121
Professional/other	10	6	9	14	16	17	16	16	25	25
Grand total, all fields	285	274	275	341	361	368	411	446	459	472

See explanatory information, if any, and SOURCE at end of table

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	U.S. citizens, female, Puerto Rican									
Science and engineering, total	33	38	39	48	47	49	42	59	63	68
Engineering, total	1	2	1	2	2	3	2	0	2	5
Chemical	0	0	0	0	1	0	0	0	1	2
Civil	0	1	0	0	0	0	1	0	0	0
Electrical	0	0	0	1	0	1	1	0	0	0
Mechanical	0	0	1	0	0	1	0	0	0	0
Other engineering	1	1	0	1	1	1	0	0	1	3
Sciences, total	32	36	38	46	45	46	40	59	61	63
Physical sciences, total	9	7	4	10	6	6	5	7	9	4
Astronomy	0	0	0	0	0	0	0	0	1	0
Chemistry	9	6	4	10	5	5	5	6	8	3
Physics	0	1	0	0	1	1	0	1	0	1
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	0	0	0	1	0	0	0	0	1	0
Mathematics	2	0	3	0	0	1	0	0	1	0
Computer sciences	0	0	0	0	0	0	1	0	0	1
Biological sciences	7	10	4	10	11	11	11	14	9	18
Agricultural sciences	3	0	2	1	0	0	3	3	0	1
Psychology	7	14	16	15	14	19	11	30	31	33
Social sciences	4	5	9	9	14	9	9	5	10	6
Non-S&E, total	52	48	51	58	60	70	69	75	86	69
Health	3	2	3	6	1	1	3	4	5	5
Humanities[1]	11	14	12	20	19	12	18	22	16	22
Education	33	29	35	30	36	53	45	45	50	34
Professional/other	5	3	1	2	4	4	3	4	15	8
Grand total, all fields	85	86	90	106	107	119	111	134	149	137
	U.S. citizens, female, Mexican American									
Science and engineering, total	27	32	34	35	41	38	42	54	59	53
Engineering, total	1	0	3	2	2	0	1	2	1	3
Chemical	0	0	1	0	1	0	0	0	1	1
Civil	0	0	0	1	0	0	0	0	0	0
Electrical	0	0	1	0	0	0	0	0	0	1
Mechanical	0	0	0	1	1	0	0	0	0	0
Other engineering	1	0	1	0	0	0	1	2	0	1
Sciences, total	26	32	31	33	39	38	41	52	58	50
Physical sciences, total	1	1	2	3	3	2	2	3	4	3
Astronomy	0	0	0	0	0	0	0	0	1	0
Chemistry	0	1	2	3	2	2	1	2	2	2
Physics	1	0	0	0	1	0	1	1	1	1
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	0	2	0	1	0	2	0	0	1	2
Mathematics	0	0	0	2	2	0	0	1	2	0
Computer sciences	0	0	0	0	0	0	0	0	2	0
Biological sciences	4	1	3	7	7	11	10	13	9	12
Agricultural sciences	0	1	0	0	0	1	1	1	1	1
Psychology	16	19	20	14	15	17	24	21	33	20
Social sciences	5	8	6	6	12	5	4	13	6	12
Non-S&E, total	44	42	35	35	55	52	71	86	69	70
Health	2	1	2	6	3	5	5	3	5	4
Humanities[1]	4	9	9	8	12	9	16	17	12	18
Education	36	30	23	19	37	32	44	63	51	41
Professional/other	2	2	1	2	3	6	6	3	1	7
Grand total, all fields	71	74	69	70	96	90	113	140	128	123

See explanatory information, if any, and SOURCE at end of table.

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Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	U.S. citizens, female, other Hispanic									
Science and engineering, total	66	59	60	70	81	83	104	88	82	115
Engineering, total	1	4	2	2	6	8	8	3	7	5
Chemical	1	0	1	0	2	2	3	0	0	2
Civil	0	0	0	0	2	1	1	2	1	0
Electrical	0	2	0	0	0	1	2	0	1	2
Mechanical	0	1	0	0	1	1	0	1	0	0
Other engineering	0	1	1	2	1	3	2	0	5	1
Sciences, total	65	55	58	68	75	75	96	85	75	110
Physical sciences, total	5	5	9	9	1	7	9	7	6	2
Astronomy	0	0	0	0	0	1	0	0	0	0
Chemistry	4	4	8	7	1	4	8	5	4	1
Physics	1	1	0	2	0	2	1	2	2	1
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	0	2	2	2	1	2	2	2	1	2
Mathematics	0	0	1	1	1	2	1	2	0	0
Computer sciences	0	0	3	1	1	1	0	0	2	4
Biological sciences	8	11	8	11	17	13	25	23	18	21
Agricultural sciences	1	0	1	2	1	1	1	3	0	1
Psychology	38	20	24	24	37	34	43	35	30	63
Social sciences	13	17	10	18	16	15	15	13	18	17
Non-S&E, total	63	55	56	95	77	76	83	84	100	97
Health	3	2	2	3	4	2	7	10	4	11
Humanities[1]	23	25	15	32	25	26	33	23	35	30
Education	34	27	32	50	39	41	36	42	52	46
Professional/other	3	1	7	10	9	7	7	9	9	10
Grand total, all fields	129	114	116	165	158	159	187	172	182	212
	U.S. citizens, female, white									
Science and engineering, total	3,712	3,916	4,168	4,403	4,602	4,558	4,841	5,000	5,046	5,162
Engineering, total	132	155	212	216	221	227	248	291	296	324
Chemical	40	41	48	45	38	56	49	45	56	63
Civil	8	11	32	27	15	17	25	44	30	29
Electrical	12	20	23	39	33	38	45	50	59	60
Mechanical	10	15	17	19	27	19	31	25	24	37
Other engineering	62	68	92	86	108	97	98	127	127	135
Sciences, total	3,580	3,761	3,956	4,187	4,381	4,331	4,593	4,709	4,750	4,838
Physical sciences, total	322	330	365	368	372	382	375	387	425	406
Astronomy	9	12	11	16	6	10	19	19	18	29
Chemistry	261	272	310	307	305	307	291	296	332	290
Physics	51	39	43	39	58	61	63	70	73	85
Other physical sciences	1	7	1	6	3	4	2	2	2	2
Earth, atmospheric, & ocean sciences	80	99	107	109	137	130	108	120	106	104
Mathematics	57	55	83	74	79	88	111	111	119	93
Computer sciences	43	38	61	77	70	64	72	70	99	56
Biological sciences	970	1,080	1,087	1,133	1,140	1,196	1,274	1,305	1,301	1,344
Agricultural sciences	104	106	145	141	121	126	112	118	99	131
Psychology	1,317	1,326	1,374	1,540	1,636	1,521	1,670	1,672	1,712	1,806
Social sciences	687	727	734	745	826	824	871	926	889	898
Non-S&E, total	4,587	4,526	4,739	5,079	5,139	5,511	5,552	5,760	5,822	5,950
Health	356	419	484	450	505	543	584	596	585	599
Humanities[1]	1,023	1,042	1,031	1,198	1,219	1,353	1,423	1,488	1,612	1,659
Education	2,687	2,609	2,694	2,843	2,852	3,030	2,939	3,052	2,968	3,076
Professional/other	521	456	530	588	563	585	606	624	657	616
Grand total, all fields	8,299	8,442	8,907	9,482	9,741	10,069	10,393	10,760	10,868	11,112

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	Non-U.S. citizens with permanent visas									
Science and engineering, total	1,089	1,130	1,124	1,197	1,285	1,383	1,641	3,021	3,509	3,007
Engineering, total	355	366	365	389	388	411	469	838	956	792
Chemical	56	50	62	50	51	60	53	87	90	74
Civil	41	46	59	61	40	51	59	89	103	93
Electrical	73	105	99	108	132	122	165	265	288	221
Mechanical	67	71	66	69	62	74	87	179	180	152
Other engineering	118	94	79	101	103	104	105	218	295	252
Sciences, total	734	764	759	808	897	972	1,172	2,183	2,553	2,215
Physical sciences, total	147	139	147	172	180	200	237	591	704	493
Astronomy	1	7	4	4	2	6	5	9	21	12
Chemistry	91	73	85	99	110	113	128	325	386	293
Physics	55	55	57	65	68	81	102	255	295	187
Other physical sciences	0	4	1	4	0	0	2	2	2	1
Earth, atmospheric, & ocean sciences	25	27	29	19	26	35	41	106	116	96
Mathematics	51	44	35	47	55	53	94	153	217	158
Computer sciences	32	42	58	55	63	67	84	117	132	92
Biological sciences	160	192	182	189	211	240	303	666	835	818
Agricultural sciences	48	71	45	57	56	62	49	97	106	103
Psychology	59	61	54	73	65	86	90	84	101	104
Social sciences	212	188	209	196	241	229	274	369	342	351
Non-S&E, total	489	492	502	501	572	597	618	726	810	758
Health	40	35	27	35	60	46	60	89	107	83
Humanities[1]	163	150	186	183	219	229	238	280	308	319
Education	172	177	164	153	174	165	177	199	218	196
Professional/other	114	130	125	130	119	157	143	158	177	160
Grand total, all fields	1,578	1,622	1,626	1,698	1,857	1,980	2,259	3,747	4,319	3,765
	Non-U.S. citizens with permanent visas, American Indian/Alaskan Native									
Science and engineering, total	0	0	0	0	0	0	0	0	0	1
Engineering, total	0	0	0	0	0	0	0	0	0	0
Chemical	0	0	0	0	0	0	0	0	0	0
Civil	0	0	0	0	0	0	0	0	0	0
Electrical	0	0	0	0	0	0	0	0	0	0
Mechanical	0	0	0	0	0	0	0	0	0	0
Other engineering	0	0	0	0	0	0	0	0	0	0
Sciences, total	0	0	0	0	0	0	0	0	0	1
Physical sciences, total	0	0	0	0	0	0	0	0	0	0
Astronomy	0	0	0	0	0	0	0	0	0	0
Chemistry	0	0	0	0	0	0	0	0	0	0
Physics	0	0	0	0	0	0	0	0	0	0
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	0	0	0	0	0	0	0	0	0	0
Mathematics	0	0	0	0	0	0	0	0	0	0
Computer sciences	0	0	0	0	0	0	0	0	0	0
Biological sciences	0	0	0	0	0	0	0	0	0	0
Agricultural sciences	0	0	0	0	0	0	0	0	0	0
Psychology	0	0	0	0	0	0	0	0	0	0
Social sciences	0	0	0	0	0	0	0	0	0	1
Non-S&E, total	0	0	0	0	2	0	0	0	0	0
Health	0	0	0	0	0	0	0	0	0	0
Humanities[1]	0	0	0	0	0	0	0	0	0	0
Education	0	0	0	0	1	0	0	0	0	0
Professional/other	0	0	0	0	1	0	0	0	0	0
Grand total, all fields	0	0	0	0	2	0	0	0	0	1

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	Non-U.S. citizens with permanent visas, Asian/Pacific Islander									
Science and engineering, total	478	462	492	521	581	694	898	2,253	2,776	2,256
Engineering, total	192	191	187	202	218	237	310	665	778	624
Chemical	36	35	37	25	23	29	36	69	74	54
Civil	20	19	21	20	19	22	31	62	76	72
Electrical	37	58	45	64	73	80	113	207	230	167
Mechanical	36	35	41	42	36	43	59	151	151	126
Other engineering	63	44	43	51	67	63	71	176	247	205
Sciences, total	286	271	305	319	363	457	588	1,588	1,998	1,632
Physical sciences, total	76	71	81	78	86	119	144	478	603	396
Astronomy	0	3	2	4	0	2	1	6	18	7
Chemistry	59	37	54	45	59	70	81	262	325	240
Physics	17	30	24	27	27	47	61	208	259	148
Other physical sciences	0	1	1	2	0	0	1	2	1	1
Earth, atmospheric, & ocean sciences	9	6	11	11	10	13	16	82	96	69
Mathematics	23	16	11	16	34	31	51	124	183	117
Computer sciences	16	24	34	38	34	49	50	84	95	74
Biological sciences	64	70	79	84	101	135	180	526	696	651
Agricultural sciences	21	21	16	21	15	24	20	58	68	68
Psychology	9	10	17	9	13	12	21	28	38	47
Social sciences	68	53	56	62	70	74	106	208	219	210
Non-S&E, total	147	159	143	144	161	222	228	343	393	350
Health	16	14	11	13	21	20	28	58	71	50
Humanities[1]	31	28	38	32	38	53	55	92	108	109
Education	54	48	45	37	45	64	59	92	95	93
Professional/other	46	69	49	62	57	85	86	101	119	98
Grand total, all fields	625	621	635	665	742	916	1,126	2,596	3,169	2,606
	Non-U.S. citizens with permanent visas, black									
Science and engineering, total	74	86	69	82	96	85	93	109	89	84
Engineering, total	13	12	9	12	12	17	9	10	17	15
Chemical	0	3	3	5	4	5	2	2	1	2
Civil	3	1	3	1	4	3	2	0	4	2
Electrical	3	0	1	1	0	5	2	3	4	5
Mechanical	1	1	0	0	0	2	1	3	6	1
Other engineering	6	7	2	5	4	2	2	2	2	5
Sciences, total	61	74	60	70	84	68	84	99	72	69
Physical sciences, total	4	5	6	11	7	4	12	13	6	14
Astronomy	0	0	0	0	0	0	0	0	0	0
Chemistry	2	4	6	10	4	4	12	11	6	11
Physics	2	1	0	1	3	0	0	2	0	3
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	1	1	1	0	1	1	2	3	1	1
Mathematics	1	2	2	0	2	0	3	2	1	0
Computer sciences	0	1	0	0	3	1	1	3	2	0
Biological sciences	15	12	11	14	13	15	11	12	17	16
Agricultural sciences	6	12	8	6	11	8	11	12	8	10
Psychology	5	4	1	4	4	5	2	12	6	8
Social sciences	29	37	31	35	43	34	42	42	31	20
Non-S&E, total	65	66	72	67	60	60	76	69	79	58
Health	6	6	5	7	5	3	7	5	5	7
Humanities[1]	8	9	8	3	8	6	16	12	18	12
Education	34	44	42	40	35	34	41	35	44	27
Professional/other	17	7	17	17	12	17	12	17	12	12
Grand total, all fields	139	152	141	149	156	145	169	178	168	142

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	Non-U.S. citizens with permanent visas, Hispanic									
Science and engineering, total	49	66	69	78	82	80	98	85	85	92
Engineering, total	10	20	14	15	12	14	10	17	16	12
Chemical	4	2	4	1	1	6	0	2	1	4
Civil	0	3	4	3	0	1	5	7	4	4
Electrical	2	4	4	4	4	3	1	5	1	0
Mechanical	1	2	0	2	1	1	2	1	3	2
Other engineering	3	9	2	5	6	3	2	2	7	2
Sciences, total	39	46	55	63	70	66	88	68	69	80
Physical sciences, total	8	5	7	9	11	14	14	15	12	16
Astronomy	0	0	1	0	0	0	1	0	1	1
Chemistry	4	4	3	7	7	8	8	10	5	4
Physics	4	1	3	2	4	6	5	5	6	11
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	2	0	3	2	4	3	5	1	6	6
Mathematics	2	1	3	3	3	2	7	1	3	2
Computer sciences	0	0	0	1	1	1	2	2	0	4
Biological sciences	10	15	13	16	16	12	21	20	23	22
Agricultural sciences	3	8	6	9	8	9	6	9	11	4
Psychology	3	4	6	9	9	11	11	5	8	6
Social sciences	11	13	17	14	18	14	22	15	6	20
Non-S&E, total	42	32	43	38	54	51	41	61	57	63
Health	0	2	1	0	4	1	5	5	1	7
Humanities[1]	25	16	23	23	31	31	23	39	31	39
Education	16	7	13	11	14	14	9	15	23	13
Professional/other	1	7	6	4	5	5	4	2	2	4
Grand total, all fields	91	98	112	116	136	131	139	146	142	155
	Non-U.S. citizens with permanent visas, white									
Science and engineering, total	440	452	452	476	484	475	526	533	529	549
Engineering, total	127	124	143	150	130	130	133	134	134	137
Chemical	14	8	17	19	22	17	13	13	14	13
Civil	18	21	28	34	16	24	21	18	19	15
Electrical	27	39	45	37	48	30	46	45	50	47
Mechanical	27	28	23	25	22	26	25	21	19	23
Other engineering	41	28	30	35	22	33	28	37	32	39
Sciences, total	313	328	309	326	354	345	393	399	395	412
Physical sciences, total	54	48	51	69	72	56	63	81	77	63
Astronomy	1	3	1	0	2	4	3	3	2	4
Chemistry	24	22	21	35	38	27	26	40	47	35
Physics	29	21	29	32	32	25	33	38	27	24
Other physical sciences	0	2	0	2	0	0	1	0	1	0
Earth, atmospheric, & ocean sciences	13	18	14	6	11	16	15	18	12	19
Mathematics	24	24	18	26	16	18	31	24	28	38
Computer sciences	14	12	23	14	25	15	31	26	34	14
Biological sciences	62	88	72	66	76	70	90	102	96	121
Agricultural sciences	13	25	10	19	18	18	12	16	17	20
Psychology	40	41	30	49	36	56	56	36	48	43
Social sciences	93	72	91	77	100	96	95	96	83	94
Non-S&E, total	214	222	224	231	276	239	265	246	270	280
Health	17	10	9	14	29	21	18	21	28	17
Humanities[1]	94	96	111	117	136	134	140	133	147	156
Education	62	72	58	58	69	44	68	55	52	61
Professional/other	41	44	46	42	42	40	39	37	43	46
Grand total, all fields	654	674	676	707	760	714	791	779	799	829

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	Non-U.S. citizens with permanent visas, male									
Science and engineering, total	830	874	850	908	926	968	1,120	2,230	2,485	2,099
Engineering, total	330	348	339	361	351	366	417	733	810	684
Chemical	48	43	53	42	42	46	48	66	72	59
Civil	39	44	56	56	36	48	57	82	87	83
Electrical	72	100	92	106	128	110	142	241	247	198
Mechanical	66	70	66	68	59	72	84	157	159	137
Other engineering	105	91	72	89	86	90	86	187	245	207
Sciences, total	500	526	511	547	575	602	703	1,497	1,675	1,415
Physical sciences, total	110	98	112	124	138	133	162	419	515	350
Astronomy	1	6	2	2	2	4	2	8	17	8
Chemistry	60	50	62	68	78	69	79	206	258	187
Physics	49	39	47	50	58	60	79	204	239	154
Other physical sciences	0	3	1	4	0	0	2	1	1	1
Earth, atmospheric, & ocean sciences	18	24	23	19	17	26	33	87	84	80
Mathematics	39	33	27	36	36	33	54	124	166	118
Computer sciences	28	35	46	45	52	53	57	100	105	78
Biological sciences	93	111	96	110	111	131	168	415	463	462
Agricultural sciences	38	62	37	45	47	46	39	69	83	73
Psychology	18	27	28	25	22	30	21	26	35	26
Social sciences	156	136	142	143	152	150	169	257	224	228
Non-S&E, total	287	290	289	282	298	325	351	407	424	384
Health	24	20	18	18	31	23	34	45	62	45
Humanities[1]	80	65	83	80	97	104	116	141	138	146
Education	94	102	89	86	92	84	96	107	94	89
Professional/other	89	103	99	98	78	114	105	114	130	104
Grand total, all fields	1,117	1,164	1,139	1,190	1,224	1,293	1,471	2,637	2,909	2,483
	Non-U.S. citizens with permanent visas, female									
Science and engineering, total	259	256	274	289	359	415	521	791	1,024	908
Engineering, total	25	18	26	28	37	45	52	105	146	108
Chemical	8	7	9	8	9	14	5	21	18	15
Civil	2	2	3	5	4	3	2	7	16	10
Electrical	1	5	7	2	4	12	23	24	41	23
Mechanical	1	1	0	1	3	2	3	22	21	15
Other engineering	13	3	7	12	17	14	19	31	50	45
Sciences, total	234	238	248	261	322	370	469	686	878	800
Physical sciences, total	37	41	35	48	42	67	75	172	189	143
Astronomy	0	1	2	2	0	2	3	1	4	4
Chemistry	31	23	23	31	32	44	49	119	128	106
Physics	6	16	10	15	10	21	23	51	56	33
Other physical sciences	0	1	0	0	0	0	0	1	1	0
Earth, atmospheric, & ocean sciences	7	3	6	0	9	9	8	19	32	16
Mathematics	12	11	8	11	19	20	40	29	51	40
Computer sciences	4	7	12	10	11	14	27	17	27	14
Biological sciences	67	81	86	79	100	109	135	251	372	356
Agricultural sciences	10	9	8	12	9	16	10	28	23	30
Psychology	41	34	26	48	43	56	69	58	66	78
Social sciences	56	52	67	53	89	79	105	112	118	123
Non-S&E, total	202	202	213	219	274	272	267	319	386	374
Health	16	15	9	17	29	23	26	44	45	38
Humanities[1]	83	85	103	103	122	125	122	139	170	173
Education	78	75	75	67	82	81	81	92	124	107
Professional/other	25	27	26	32	41	43	38	44	47	56
Grand total, all fields	461	458	487	508	633	687	788	1,110	1,410	1,282

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	Non-U.S. citizens with temporary visas									
Science and engineering, total	4,468	4,936	5,391	6,571	7,641	8,092	8,113	7,521	6,994	7,802
Engineering, total	1,532	1,721	1,940	2,277	2,633	2,743	2,784	2,653	2,524	2,716
Chemical	216	236	236	250	281	339	336	336	318	399
Civil	233	266	262	284	353	357	380	385	337	369
Electrical	310	419	498	602	690	725	703	735	712	749
Mechanical	303	333	358	465	493	538	554	459	437	430
Other engineering	470	467	586	676	816	784	811	738	720	769
Sciences, total	2,936	3,215	3,451	4,294	5,008	5,349	5,329	4,868	4,470	5,086
Physical sciences, total	801	870	890	1,073	1,257	1,346	1,263	1,107	930	1,139
Astronomy	23	20	26	30	37	28	34	32	28	42
Chemistry	399	442	461	530	689	729	675	597	493	613
Physics	376	403	401	507	525	581	550	471	399	481
Other physical sciences	3	5	2	6	6	8	4	7	10	3
Earth, atmospheric, & ocean sciences	122	132	122	171	185	236	235	197	173	205
Mathematics	302	305	346	424	506	511	517	448	382	441
Computer sciences	143	176	178	271	340	365	348	343	365	376
Biological sciences	492	557	608	853	1,059	1,159	1,246	1,058	969	1,240
Agricultural sciences	289	345	355	440	435	472	447	453	429	442
Psychology	85	84	106	117	133	156	148	151	164	181
Social sciences	702	746	846	945	1,093	1,104	1,125	1,111	1,058	1,062
Non-S&E, total	1,144	1,259	1,257	1,522	1,670	1,861	1,819	1,885	1,816	1,808
Health	96	118	134	166	171	226	214	230	245	267
Humanities[1]	252	290	283	354	444	495	466	529	548	522
Education	421	481	452	501	503	553	546	537	502	477
Professional/other	375	370	388	501	552	587	593	589	521	542
Grand total, all fields	5,612	6,195	6,648	8,093	9,311	9,953	9,932	9,406	8,810	9,610
	Non-U.S. citizens with temporary visas, American Indian/Alaskan Native									
Science and engineering, total	1	0	0	0	0	1	1	2	0	2
Engineering, total	1	0	0	0	0	0	0	1	0	1
Chemical	0	0	0	0	0	0	0	0	0	0
Civil	0	0	0	0	0	0	0	0	0	0
Electrical	1	0	0	0	0	0	0	0	0	0
Mechanical	0	0	0	0	0	0	0	0	0	0
Other engineering	0	0	0	0	0	0	0	1	0	1
Sciences, total	0	0	0	0	0	1	1	1	0	1
Physical sciences, total	0	0	0	0	0	0	0	0	0	1
Astronomy	0	0	0	0	0	0	0	0	0	0
Chemistry	0	0	0	0	0	0	0	0	0	1
Physics	0	0	0	0	0	0	0	0	0	0
Other physical sciences	0	0	0	0	0	0	0	0	0	0
Earth, atmospheric, & ocean sciences	0	0	0	0	0	0	0	0	0	0
Mathematics	0	0	0	0	0	0	0	1	0	0
Computer sciences	0	0	0	0	0	0	0	0	0	0
Biological sciences	0	0	0	0	0	1	0	0	0	0
Agricultural sciences	0	0	0	0	0	0	1	0	0	0
Psychology	0	0	0	0	0	0	0	0	0	0
Social sciences	0	0	0	0	0	0	0	0	0	0
Non-S&E, total	0	0	0	1	0	1	0	1	0	0
Health	0	0	0	0	0	0	0	0	0	0
Humanities[1]	0	0	0	0	0	1	0	1	0	0
Education	0	0	0	1	0	0	0	0	0	0
Professional/other	0	0	0	0	0	0	0	0	0	0
Grand total, all fields	1	0	0	1	0	2	1	3	0	2

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	Non-U.S. citizens with temporary visas, Asian/Pacific Islander									
Science and engineering, total	2,459	2,897	3,254	4,160	5,017	5,495	5,579	4,788	4,423	5,131
Engineering, total	958	1,124	1,264	1,497	1,848	1,992	2,058	1,839	1,799	2,008
Chemical	155	167	148	165	210	243	248	222	236	282
Civil	118	147	137	163	199	202	241	225	217	255
Electrical	187	279	327	396	501	516	516	518	500	566
Mechanical	202	244	242	341	383	425	437	359	339	347
Other engineering	296	287	410	432	555	606	616	515	507	558
Sciences, total	1,501	1,773	1,990	2,663	3,169	3,503	3,521	2,949	2,624	3,123
Physical sciences, total	506	595	642	792	910	998	934	773	597	766
Astronomy	13	6	13	15	19	17	19	15	14	19
Chemistry	267	329	362	418	538	569	533	452	360	454
Physics	225	257	266	353	351	409	380	303	220	291
Other physical sciences	1	3	1	6	2	3	2	3	3	2
Earth, atmospheric, & ocean sciences	57	67	56	95	96	141	142	92	89	110
Mathematics	131	150	187	254	321	330	320	243	170	233
Computer sciences	86	114	120	192	239	253	254	244	235	267
Biological sciences	260	323	352	558	707	838	907	676	630	832
Agricultural sciences	118	131	149	209	224	249	228	212	208	250
Psychology	15	27	35	48	47	62	71	70	93	89
Social sciences	328	366	449	515	625	632	665	639	602	576
Non-S&E, total	476	621	653	771	932	1,010	1,025	1,011	955	962
Health	37	53	72	76	94	125	136	130	142	151
Humanities[1]	62	101	94	104	162	170	179	174	179	175
Education	178	229	231	255	294	318	310	312	281	278
Professional/other	199	238	256	336	382	397	400	395	353	358
Grand total, all fields	2,935	3,518	3,907	4,931	5,949	6,505	6,604	5,799	5,378	6,093
	Non-U.S. citizens with temporary visas, black									
Science and engineering, total	183	191	171	195	189	195	210	268	213	237
Engineering, total	31	36	23	35	25	24	31	34	31	41
Chemical	3	4	3	4	3	1	6	8	2	9
Civil	15	5	5	10	7	5	10	9	4	8
Electrical	4	4	6	8	4	5	3	6	10	6
Mechanical	2	4	3	3	2	6	4	2	9	4
Other engineering	7	19	6	10	9	7	8	9	6	14
Sciences, total	152	155	148	160	164	171	179	234	182	196
Physical sciences, total	17	17	13	6	28	23	15	25	25	24
Astronomy	0	0	0	0	1	0	0	0	0	0
Chemistry	14	12	12	4	21	20	13	18	17	21
Physics	3	5	1	2	6	3	2	6	8	3
Other physical sciences	0	0	0	0	0	0	0	1	0	0
Earth, atmospheric, & ocean sciences	1	4	3	3	2	9	3	4	6	8
Mathematics	7	4	5	9	4	8	9	11	6	6
Computer sciences	1	2	3	1	5	1	3	1	3	4
Biological sciences	19	32	24	26	27	24	28	43	24	39
Agricultural sciences	26	31	33	39	32	43	42	68	49	39
Psychology	4	6	4	6	6	3	6	6	4	5
Social sciences	77	59	63	70	60	60	73	76	65	71
Non-S&E, total	122	100	102	96	104	116	112	121	124	127
Health	7	9	12	4	15	17	13	12	18	17
Humanities[1]	32	14	9	12	17	26	31	22	27	29
Education	55	60	56	56	52	48	51	59	52	61
Professional/other	28	17	25	24	20	25	17	28	27	20
Grand total, all fields	305	291	273	291	293	311	322	389	337	364

See explanatory information, if any, and SOURCE at end of table.

Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	Non-U.S. citizens with temporary visas, Hispanic									
Science and engineering, total	289	292	311	301	359	367	361	386	349	404
Engineering, total	63	61	70	74	68	66	78	93	72	99
Chemical	8	15	12	9	10	14	16	19	8	23
Civil	15	18	11	15	13	14	13	17	12	19
Electrical	6	6	10	10	18	15	15	14	20	18
Mechanical	8	6	10	14	5	6	11	10	7	6
Other engineering	26	16	27	26	22	17	23	33	25	33
Sciences, total	226	231	241	227	291	301	283	293	277	305
Physical sciences, total	40	34	28	33	37	42	33	27	21	35
Astronomy	1	1	1	3	2	1	3	2	2	2
Chemistry	20	17	15	17	20	21	15	19	9	13
Physics	18	16	12	13	15	19	15	6	9	20
Other physical sciences	1	0	0	0	0	1	0	0	1	0
Earth, atmospheric, & ocean sciences	16	12	14	8	10	14	21	22	18	22
Mathematics	23	24	19	20	33	27	25	24	23	19
Computer sciences	6	5	6	9	13	7	6	9	8	15
Biological sciences	53	45	56	50	62	68	59	69	77	76
Agricultural sciences	44	64	55	54	58	47	62	60	59	42
Psychology	9	5	9	8	13	10	8	9	9	12
Social sciences	35	42	54	45	65	86	69	73	62	84
Non-S&E, total	49	57	52	85	87	115	93	116	123	108
Health	7	3	4	9	7	12	11	10	10	14
Humanities[1]	20	26	18	43	47	51	43	64	76	59
Education	10	21	22	18	23	34	19	30	22	19
Professional/other	12	7	8	15	10	18	20	12	15	16
Grand total, all fields	338	349	363	386	446	482	454	502	472	512
	Non-U.S. citizens with temporary visas, white									
Science and engineering, total	1,176	1,273	1,380	1,502	1,642	1,696	1,761	1,850	1,801	1,829
Engineering, total	375	411	491	549	531	556	559	599	548	495
Chemical	41	35	57	58	48	68	62	74	62	70
Civil	71	88	96	82	113	121	107	121	90	77
Electrical	90	109	133	154	139	153	149	175	157	139
Mechanical	70	69	88	90	67	85	91	75	77	64
Other engineering	103	110	117	165	164	129	150	154	162	145
Sciences, total	801	862	889	953	1,111	1,140	1,202	1,251	1,253	1,334
Physical sciences, total	187	184	172	174	235	239	251	260	255	292
Astronomy	7	10	11	11	13	10	12	15	12	19
Chemistry	77	74	57	62	87	94	100	101	89	116
Physics	102	99	103	101	132	132	137	141	148	156
Other physical sciences	1	1	1	0	3	3	2	3	6	1
Earth, atmospheric, & ocean sciences	39	40	43	54	61	57	61	71	59	63
Mathematics	102	107	121	119	112	129	150	156	172	171
Computer sciences	40	44	42	59	78	88	76	84	107	79
Biological sciences	122	129	150	174	216	193	217	235	208	272
Agricultural sciences	69	91	83	92	86	104	101	97	97	102
Psychology	51	37	56	53	60	73	59	62	56	70
Social sciences	191	230	222	228	263	257	287	286	299	285
Non-S&E, total	389	409	374	446	458	539	533	571	556	563
Health	37	43	38	62	49	53	51	56	67	69
Humanities[1]	121	137	150	162	192	230	195	249	250	246
Education	129	140	107	130	112	124	142	122	128	110
Professional/other	102	89	79	92	105	132	145	144	111	138
Grand total, all fields	1,565	1,682	1,754	1,948	2,100	2,235	2,294	2,421	2,357	2,392

See explanatory information, if any, and SOURCE at end of table.

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Table 3. Science and engineering (S&E) doctorates awarded, by citizenship status, sex, racial/ethnic group, and major field of study of recipients: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	Non-U.S. citizens with temporary visas, male									
Science and engineering, total	3,904	4,254	4,609	5,590	6,412	6,741	6,658	6,201	5,748	6,305
Engineering, total	1,478	1,651	1,850	2,157	2,484	2,574	2,623	2,475	2,365	2,488
Chemical	208	226	225	234	259	308	309	301	297	354
Civil	227	252	250	271	337	330	358	360	314	338
Electrical	299	408	469	573	659	679	660	679	668	697
Mechanical	298	324	349	452	473	518	535	445	424	414
Other engineering	446	441	557	627	756	739	761	690	662	685
Sciences, total	2,426	2,603	2,759	3,433	3,928	4,167	4,035	3,726	3,383	3,817
Physical sciences, total	706	743	743	895	1,041	1,098	1,015	908	770	930
Astronomy	19	18	22	28	30	24	32	28	24	36
Chemistry	340	366	355	421	547	556	503	440	378	465
Physics	344	354	365	441	460	510	477	433	360	427
Other physical sciences	3	5	1	5	4	8	3	7	8	2
Earth, atmospheric, & ocean sciences	109	119	109	153	165	198	202	158	151	169
Mathematics	260	262	299	363	420	427	422	364	304	358
Computer sciences	138	168	160	256	317	329	322	302	322	335
Biological sciences	333	385	400	582	694	787	809	704	635	799
Agricultural sciences	248	295	300	359	366	391	357	366	340	340
Psychology	48	48	60	62	77	81	64	71	79	87
Social sciences	584	583	688	763	848	856	844	853	782	799
Non-S&E, total	818	880	835	1,042	1,105	1,222	1,205	1,129	1,110	1,090
Health	61	75	87	101	101	159	138	115	142	151
Humanities[1]	169	180	171	211	255	280	275	294	309	280
Education	270	308	264	306	288	299	306	269	244	242
Professional/other	318	317	313	424	461	484	486	451	415	417
Grand total, all fields	4,722	5,134	5,444	6,632	7,517	7,963	7,863	7,330	6,858	7,395
	Non-U.S. citizens with temporary visas, female									
Science and engineering, total	564	682	782	981	1,229	1,351	1,455	1,320	1,246	1,497
Engineering, total	54	70	90	120	149	169	161	178	159	228
Chemical	8	10	11	16	22	31	27	35	21	45
Civil	6	14	12	13	16	27	22	25	23	31
Electrical	11	11	29	29	31	46	43	56	44	52
Mechanical	5	9	9	13	20	20	19	14	13	16
Other engineering	24	26	29	49	60	45	50	48	58	84
Sciences, total	510	612	692	861	1,080	1,182	1,294	1,142	1,087	1,269
Physical sciences, total	95	127	147	178	216	248	248	199	160	209
Astronomy	4	2	4	2	7	4	2	4	4	6
Chemistry	59	76	106	109	142	173	172	157	115	148
Physics	32	49	36	66	65	71	73	38	39	54
Other physical sciences	0	0	1	1	2	0	1	0	2	1
Earth, atmospheric, & ocean sciences	13	13	13	18	20	38	33	39	22	36
Mathematics	42	43	47	61	86	84	95	84	78	83
Computer sciences	5	8	18	15	23	36	26	41	43	41
Biological sciences	159	172	208	271	365	372	437	354	334	441
Agricultural sciences	41	50	55	81	69	81	90	87	89	102
Psychology	37	36	46	55	56	75	84	80	85	94
Social sciences	118	163	158	182	245	248	281	258	276	263
Non-S&E, total	326	379	422	480	565	639	614	756	706	718
Health	35	43	47	65	70	67	76	115	103	116
Humanities[1]	83	110	112	143	189	215	191	235	239	242
Education	151	173	188	195	215	254	240	268	258	235
Professional/other	57	53	75	77	91	103	107	138	106	125
Grand total, all fields	890	1,061	1,204	1,461	1,794	1,990	2,069	2,076	1,952	2,215

[1] Categories differ from those published by other Federal sponsors and the National Research Council in that linguistics, history of science, American studies, and archaeology are included not in humanities but in social science.

NOTE: Details may not add to totals because of persons with unknown race/ethnicity.

SOURCE: National Science Foundation/SRS, Survey of Earned Doctorates.

Table 4. Science and engineering (S&E) doctorates awarded, by major field and citizenship status of recipients: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	Total									
Science and engineering, total	19,894	20,932	21,732	22,868	24,023	24,675	25,443	26,205	26,535	27,230
Engineering, total	3,712	4,187	4,543	4,894	5,214	5,438	5,698	5,822	6,008	6,305
Aeronautical/astronautical	142	150	178	192	207	234	228	230	252	287
Chemical	584	685	712	658	691	725	737	725	708	798
Civil	477	531	538	553	575	594	624	684	656	697
Electrical	779	1,010	1,137	1,276	1,405	1,483	1,543	1,673	1,731	1,740
Industrial	120	127	162	151	165	196	236	228	284	258
Materials/metallurgical	392	374	380	440	489	485	535	539	588	572
Mechanical	657	715	760	884	875	987	1,030	1,015	1,025	1,052
Other engineering	561	595	676	740	807	734	765	728	764	901
Sciences, total	16,182	16,745	17,189	17,974	18,809	19,237	19,745	20,383	20,527	20,925
Physical sciences, total	3,238	3,350	3,261	3,524	3,626	3,781	3,699	3,977	3,841	3,838
Astronomy	100	130	113	128	125	134	145	144	173	192
Chemistry	1,975	2,015	1,970	2,100	2,194	2,214	2,137	2,257	2,162	2,148
Physics	1,137	1,172	1,161	1,265	1,286	1,403	1,399	1,548	1,479	1,485
Other physical sciences	26	33	17	31	21	30	18	28	27	13
Earth, atmospheric, and ocean sciences	602	695	723	738	815	794	771	824	780	794
Mathematics	740	749	859	892	1,039	1,058	1,146	1,118	1,190	1,122
Computer sciences	450	515	612	705	800	869	880	903	997	921
Biological sciences	3,839	4,111	4,116	4,328	4,650	4,799	5,092	5,203	5,376	5,723
Agricultural sciences	976	1,015	1,086	1,174	1,073	1,063	968	1,078	1,036	1,037
Psychology	3,173	3,074	3,208	3,281	3,250	3,263	3,420	3,379	3,429	3,491
Social sciences	3,164	3,236	3,324	3,332	3,556	3,610	3,769	3,901	3,878	3,999
Non-S&E, total	12,476	12,568	12,595	13,199	13,511	14,215	14,358	14,829	15,208	15,185
Health	800	882	974	956	1,041	1,112	1,197	1,296	1,330	1,324
Humanities [1]	3,170	3,274	3,242	3,535	3,720	4,036	4,092	4,374	4,690	4,713
Education	6,454	6,362	6,281	6,510	6,454	6,677	6,689	6,708	6,649	6,772
Professional/other	2,052	2,050	2,098	2,198	2,296	2,390	2,380	2,451	2,539	2,376
Grand total, all fields	32,370	33,500	34,327	36,067	37,534	38,890	39,801	41,034	41,743	42,415
	Citizenship known									
Science and engineering, total	18,523	19,434	19,983	21,935	23,555	24,034	24,686	25,708	25,990	26,430
Engineering, total	3,445	3,867	4,169	4,623	5,107	5,263	5,481	5,706	5,866	6,099
Aeronautical/astronautical	131	129	166	176	205	215	219	226	247	277
Chemical	566	644	680	642	680	717	713	716	699	791
Civil	436	499	509	525	566	572	607	677	646	674
Electrical	703	922	1,037	1,201	1,376	1,444	1,498	1,634	1,683	1,675
Industrial	113	117	150	148	162	192	230	228	280	252
Materials/metallurgical	373	352	347	424	481	469	516	530	575	556
Mechanical	611	660	683	833	852	964	988	997	1,000	1,018
Other engineering	512	544	597	674	785	690	710	698	736	856
Sciences, total	15,078	15,567	15,814	17,312	18,448	18,771	19,205	20,002	20,124	20,331
Physical sciences, total	3,043	3,128	3,021	3,414	3,557	3,703	3,593	3,896	3,771	3,707
Astronomy	96	124	108	126	123	134	145	144	169	191
Chemistry	1,871	1,893	1,844	2,027	2,150	2,170	2,075	2,213	2,117	2,074
Physics	1,058	1,084	1,055	1,232	1,264	1,371	1,356	1,515	1,458	1,429
Other physical sciences	18	27	14	29	20	28	17	24	27	13
Earth, atmospheric, and ocean sciences	557	652	669	706	803	777	739	810	767	763
Mathematics	698	691	774	846	1,024	1,018	1,107	1,105	1,153	1,087
Computer sciences	418	502	574	674	791	854	857	886	981	889
Biological sciences	3,633	3,879	3,908	4,233	4,584	4,727	4,998	5,146	5,298	5,605
Agricultural sciences	921	955	1,006	1,127	1,055	1,045	953	1,069	1,027	1,018
Psychology	2,891	2,813	2,843	3,109	3,151	3,142	3,309	3,287	3,348	3,407
Social sciences	2,917	2,947	3,019	3,203	3,483	3,505	3,649	3,803	3,779	3,855
Non-S&E, total	11,651	11,673	11,692	12,761	13,186	13,909	13,954	14,592	14,879	14,686
Health	742	810	890	922	1,010	1,081	1,153	1,280	1,290	1,283
Humanities [1]	2,924	3,049	2,999	3,436	3,638	3,935	3,978	4,295	4,603	4,567
Education	6,086	5,958	5,862	6,288	6,291	6,570	6,514	6,600	6,497	6,539
Professional/other	1,899	1,856	1,941	2,115	2,247	2,323	2,309	2,417	2,489	2,297
Grand total, all fields	30,174	31,107	31,675	34,696	36,741	37,943	38,640	40,300	40,869	41,116

See explanatory information, if any, and SOURCE at end of table.

Table 4. Science and engineering (S&E) doctorates awarded, by major field and citizenship status of recipients: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	U.S. citizens									
Science and engineering, total	12,966	13,368	13,468	14,167	14,629	14,559	14,932	15,166	15,487	15,621
Engineering, total	1,558	1,780	1,864	1,957	2,086	2,109	2,228	2,215	2,386	2,591
Aeronautical/astronautical	64	67	74	82	103	95	114	110	140	166
Chemical	294	358	382	342	348	318	324	293	291	318
Civil	162	187	188	180	173	164	168	203	206	212
Electrical	320	398	440	491	554	597	630	634	683	705
Industrial	44	40	51	56	50	54	89	89	108	107
Materials/metallurgical	176	172	173	190	211	202	228	218	238	244
Mechanical	241	256	259	299	297	352	347	359	383	436
Other engineering	257	302	297	317	350	327	328	309	337	403
Sciences, total	11,408	11,588	11,604	12,210	12,543	12,450	12,704	12,951	13,101	13,030
Physical sciences, total	2,095	2,119	1,984	2,169	2,120	2,157	2,093	2,198	2,137	2,075
Astronomy	72	97	78	92	84	100	106	103	120	137
Chemistry	1,381	1,378	1,298	1,398	1,351	1,328	1,272	1,291	1,238	1,168
Physics	627	626	597	660	671	709	704	789	764	761
Other physical sciences	15	18	11	19	14	20	11	15	15	9
Earth, atmospheric, and ocean sciences	410	493	518	516	592	506	463	507	478	462
Mathematics	345	342	393	375	463	454	496	504	554	488
Computer sciences	243	284	338	348	388	422	425	426	484	421
Biological sciences	2,981	3,130	3,118	3,191	3,314	3,328	3,449	3,422	3,494	3,547
Agricultural sciences	584	539	606	630	564	511	457	519	492	473
Psychology	2,747	2,668	2,683	2,919	2,953	2,900	3,071	3,052	3,083	3,122
Social sciences	2,003	2,013	1,964	2,062	2,149	2,172	2,250	2,323	2,379	2,442
Non-S&E, total	10,018	9,922	9,933	10,738	10,944	11,451	11,517	11,981	12,253	12,120
Health	606	657	729	721	779	809	879	961	938	933
Humanities [1]	2,509	2,609	2,530	2,899	2,975	3,211	3,274	3,486	3,747	3,726
Education	5,493	5,300	5,246	5,634	5,614	5,852	5,791	5,864	5,777	5,866
Professional/other	1,410	1,356	1,428	1,484	1,576	1,579	1,573	1,670	1,791	1,595
Grand total, all fields	22,984	23,290	23,401	24,905	25,573	26,010	26,449	27,147	27,740	27,741
	Non-U.S. citizens									
Science and engineering, total	5,557	6,066	6,515	7,768	8,926	9,475	9,754	10,542	10,503	10,809
Engineering, total	1,887	2,087	2,305	2,666	3,021	3,154	3,253	3,491	3,480	3,508
Aeronautical/astronautical	67	62	92	94	102	120	105	116	107	111
Chemical	272	286	298	300	332	399	389	423	408	473
Civil	274	312	321	345	393	408	439	474	440	462
Electrical	383	524	597	710	822	847	868	1,000	1,000	970
Industrial	69	77	99	92	112	138	141	139	172	145
Materials/metallurgical	197	180	174	234	270	267	288	312	337	312
Mechanical	370	404	424	534	555	612	641	638	617	582
Other engineering	255	242	300	357	435	363	382	389	399	453
Sciences, total	3,670	3,979	4,210	5,102	5,905	6,321	6,501	7,051	7,023	7,301
Physical sciences, total	948	1,009	1,037	1,245	1,437	1,546	1,500	1,698	1,634	1,632
Astronomy	24	27	30	34	39	34	39	41	49	54
Chemistry	490	515	546	629	799	842	803	922	879	906
Physics	431	458	458	572	593	662	652	726	694	668
Other physical sciences	3	9	3	10	6	8	6	9	12	4
Earth, atmospheric, and ocean sciences	147	159	151	190	211	271	276	303	289	301
Mathematics	353	349	381	471	561	564	611	601	599	599
Computer sciences	175	218	236	326	403	432	432	460	497	468
Biological sciences	652	749	790	1,042	1,270	1,399	1,549	1,724	1,804	2,058
Agricultural sciences	337	416	400	497	491	534	496	550	535	545
Psychology	144	145	160	190	198	242	238	235	265	285
Social sciences	914	934	1,055	1,141	1,334	1,333	1,399	1,480	1,400	1,413
Non-S&E, total	1,633	1,751	1,759	2,023	2,242	2,458	2,437	2,611	2,626	2,566
Health	136	153	161	201	231	272	274	319	352	350
Humanities [1]	415	440	469	537	663	724	704	809	856	841
Education	593	658	616	654	677	718	723	736	720	673
Professional/other	489	500	513	631	671	744	736	747	698	702
Grand total, all fields	7,190	7,817	8,274	9,791	11,168	11,933	12,191	13,153	13,129	13,375

See explanatory information, if any, and SOURCE at end of table.

Table 4. Science and engineering (S&E) doctorates awarded, by major field and citizenship status of recipients: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	Non-U.S. citizens with permanent visas									
Science and engineering, total	1,089	1,130	1,124	1,197	1,285	1,383	1,641	3,021	3,509	3,007
Engineering, total	355	366	365	389	388	411	469	838	956	792
Aeronautical/astronautical	8	14	8	8	11	8	6	20	13	18
Chemical	56	50	62	50	51	60	53	87	90	74
Civil	41	46	59	61	40	51	59	89	103	93
Electrical	73	105	99	108	132	122	165	265	288	221
Industrial	13	11	8	13	18	20	16	30	41	29
Materials/metallurgical	38	27	21	26	29	34	39	79	114	92
Mechanical	67	71	66	69	62	74	87	179	180	152
Other engineering	59	42	42	54	45	42	44	89	127	113
Sciences, total	734	764	759	808	897	972	1,172	2,183	2,553	2,215
Physical sciences, total	147	139	147	172	180	200	237	591	704	493
Astronomy	1	7	4	4	2	6	5	9	21	12
Chemistry	91	73	85	99	110	113	128	325	386	293
Physics	55	55	57	65	68	81	102	255	295	187
Other physical sciences	0	4	1	4	0	0	2	2	2	1
Earth, atmospheric, and ocean sciences	25	27	29	19	26	35	41	106	116	96
Mathematics	51	44	35	47	55	53	94	153	217	158
Computer sciences	32	42	58	55	63	67	84	117	132	92
Biological sciences	160	192	182	189	211	240	303	666	835	818
Agricultural sciences	48	71	45	57	56	62	49	97	106	103
Psychology	59	61	54	73	65	86	90	84	101	104
Social sciences	212	188	209	196	241	229	274	369	342	351
Non-S&E, total	489	492	502	501	572	597	618	726	810	758
Health	40	35	27	35	60	46	60	89	107	83
Humanities [1]	163	150	186	183	219	229	238	280	308	319
Education	172	177	164	153	174	165	177	199	218	196
Professional/other	114	130	125	130	119	157	143	158	177	160
Grand total, all fields	1,578	1,622	1,626	1,698	1,857	1,980	2,259	3,747	4,319	3,765
	Non-U.S. citizens with temporary visas									
Science and engineering, total	4,468	4,936	5,391	6,571	7,641	8,092	8,113	7,521	6,994	7,802
Engineering, total	1,532	1,721	1,940	2,277	2,633	2,743	2,784	2,653	2,524	2,716
Aeronautical/astronautical	59	48	84	86	91	112	99	96	94	93
Chemical	216	236	236	250	281	339	336	336	318	399
Civil	233	266	262	284	353	357	380	385	337	369
Electrical	310	419	498	602	690	725	703	735	712	749
Industrial	56	66	91	79	94	118	125	109	131	116
Materials/metallurgical	159	153	153	208	241	233	249	233	223	220
Mechanical	303	333	358	465	493	538	554	459	437	430
Other engineering	196	200	258	303	390	321	338	300	272	340
Sciences, total	2,936	3,215	3,451	4,294	5,008	5,349	5,329	4,868	4,470	5,086
Physical sciences, total	801	870	890	1,073	1,257	1,346	1,263	1,107	930	1,139
Astronomy	23	20	26	30	37	28	34	32	28	42
Chemistry	399	442	461	530	689	729	675	597	493	613
Physics	376	403	401	507	525	581	550	471	399	481
Other physical sciences	3	5	2	6	6	8	4	7	10	3
Earth, atmospheric, and ocean sciences	122	132	122	171	185	236	235	197	173	205
Mathematics	302	305	346	424	506	511	517	448	382	441
Computer sciences	143	176	178	271	340	365	348	343	365	376
Biological sciences	492	557	608	853	1,059	1,159	1,246	1,058	969	1,240
Agricultural sciences	289	345	355	440	435	472	447	453	429	442
Psychology	85	84	106	117	133	156	148	151	164	181
Social sciences	702	746	846	945	1,093	1,104	1,125	1,111	1,058	1,062
Non-S&E, total	1,144	1,259	1,257	1,522	1,670	1,861	1,819	1,885	1,816	1,808
Health	96	118	134	166	171	226	214	230	245	267
Humanities [1]	252	290	283	354	444	495	466	529	548	522
Education	421	481	452	501	503	553	546	537	502	477
Professional/other	375	370	388	501	552	587	593	589	521	542
Grand total, all fields	5,612	6,195	6,648	8,093	9,311	9,953	9,932	9,406	8,810	9,610

See explanatory information, if any, and SOURCE at end of table.

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Table 4. Science and engineering (S&E) doctorates awarded, by major field and citizenship status of recipients: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	Citizenship unknown									
Science and engineering, total	1,371	1,498	1,749	933	468	641	757	497	545	800
Engineering, total	267	320	374	271	107	175	217	116	142	206
Aeronautical/astronautical	11	21	12	16	2	19	9	4	5	10
Chemical	18	41	32	16	11	8	24	9	9	7
Civil	41	32	29	28	9	22	17	7	10	23
Electrical	76	88	100	75	29	39	45	39	48	65
Industrial	7	10	12	3	3	4	6	0	4	6
Materials/metallurgical	19	22	33	16	8	16	19	9	13	16
Mechanical	46	55	77	51	23	23	42	18	25	34
Other engineering	49	51	79	66	22	44	55	30	28	45
Sciences, total	1,104	1,178	1,375	662	361	466	540	381	403	594
Physical sciences, total	195	222	240	110	69	78	106	81	70	131
Astronomy	4	6	5	2	2	0	0	0	4	1
Chemistry	104	122	126	73	44	44	62	44	45	74
Physics	79	88	106	33	22	32	43	33	21	56
Other physical sciences	8	6	3	2	1	2	1	4	0	0
Earth, atmospheric, and ocean sciences	45	43	54	32	12	17	32	14	13	31
Mathematics	42	58	85	46	15	40	39	13	37	35
Computer sciences	32	13	38	31	9	15	23	17	16	32
Biological sciences	206	232	208	95	66	72	94	57	78	118
Agricultural sciences	55	60	80	47	18	18	15	9	9	19
Psychology	282	261	365	172	99	121	111	92	81	84
Social sciences	247	289	305	129	73	105	120	98	99	144
Non-S&E, total	825	895	903	438	325	306	404	237	329	499
Health	58	72	84	34	31	31	44	16	40	41
Humanities [1]	246	225	243	99	82	101	114	79	87	146
Education	368	404	419	222	163	107	175	108	152	233
Professional/other	153	194	157	83	49	67	71	34	50	79
Grand total, all fields	2,196	2,393	2,652	1,371	793	947	1,161	734	874	1,299

[1] Categories differ from those published by other Federal sponsors and the National Research Council in that linguistics, history of science, American studies, and archaeology are included not in humanities but in social science.

SOURCE: National Science Foundation/SRS, Survey of Earned Doctorates.

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Table 4a. Percentage distribution of science and engineering (S&E) doctorates awarded, by major field and citizenship status of recipients: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	Total									
Science and engineering, total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Engineering, total	18.7	20.0	20.9	21.4	21.7	22.0	22.4	22.2	22.6	23.2
Aeronautical/astronautical	.7	.7	.8	.8	.9	.9	.9	.9	.9	1.1
Chemical	2.9	3.3	3.3	2.9	2.9	2.9	2.9	2.8	2.7	2.9
Civil	2.4	2.5	2.5	2.4	2.4	2.4	2.5	2.6	2.5	2.6
Electrical	3.9	4.8	5.2	5.6	5.8	6.0	6.1	6.4	6.5	6.4
Industrial	.6	.6	.7	.7	.7	.8	.9	.9	1.1	.9
Materials/metallurgical	2.0	1.8	1.7	1.9	2.0	2.0	2.1	2.1	2.2	2.1
Mechanical	3.3	3.4	3.5	3.9	3.6	4.0	4.0	3.9	3.9	3.9
Other engineering	2.8	2.8	3.1	3.2	3.4	3.0	3.0	2.8	2.9	3.3
Sciences, total	81.3	80.0	79.1	78.6	78.3	78.0	77.6	77.8	77.4	76.8
Physical sciences, total	16.3	16.0	15.0	15.4	15.1	15.3	14.5	15.2	14.5	14.1
Astronomy	.5	.6	.5	.6	.5	.5	.6	.5	.7	.7
Chemistry	9.9	9.6	9.1	9.2	9.1	9.0	8.4	8.6	8.1	7.9
Physics	5.7	5.6	5.3	5.5	5.4	5.7	5.5	5.9	5.6	5.5
Other physical sciences	.1	.2	.1	.1	.1	.1	.1	.1	.1	.0
Earth, atmospheric, and ocean sciences	3.0	3.3	3.3	3.2	3.4	3.2	3.0	3.1	2.9	2.9
Mathematics	3.7	3.6	4.0	3.9	4.3	4.3	4.5	4.3	4.5	4.1
Computer sciences	2.3	2.5	2.8	3.1	3.3	3.5	3.5	3.4	3.8	3.4
Biological sciences	19.3	19.6	18.9	18.9	19.4	19.4	20.0	19.9	20.3	21.0
Agricultural sciences	4.9	4.8	5.0	5.1	4.5	4.3	3.8	4.1	3.9	3.8
Psychology	15.9	14.7	14.8	14.3	13.5	13.2	13.4	12.9	12.9	12.8
Social sciences	15.9	15.5	15.3	14.6	14.8	14.6	14.8	14.9	14.6	14.7
	Citizenship known									
Science and engineering, total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Engineering, total	18.6	19.9	20.9	21.1	21.7	21.9	22.2	22.2	22.6	23.1
Aeronautical/astronautical	.7	.7	.8	.8	.9	.9	.9	.9	1.0	1.0
Chemical	3.1	3.3	3.4	2.9	2.9	3.0	2.9	2.8	2.7	3.0
Civil	2.4	2.6	2.5	2.4	2.4	2.4	2.5	2.6	2.5	2.6
Electrical	3.8	4.7	5.2	5.5	5.8	6.0	6.1	6.4	6.5	6.3
Industrial	.6	.6	.8	.7	.7	.8	.9	.9	1.1	1.0
Materials/metallurgical	2.0	1.8	1.7	1.9	2.0	2.0	2.1	2.1	2.2	2.1
Mechanical	3.3	3.4	3.4	3.8	3.6	4.0	4.0	3.9	3.8	3.9
Other engineering	2.8	2.8	3.0	3.1	3.3	2.9	2.9	2.7	2.8	3.2
Sciences, total	81.4	80.1	79.1	78.9	78.3	78.1	77.8	77.8	77.4	76.9
Physical sciences, total	16.4	16.1	15.1	15.6	15.1	15.4	14.6	15.2	14.5	14.0
Astronomy	.5	.6	.5	.6	.5	.6	.6	.6	.7	.7
Chemistry	10.1	9.7	9.2	9.2	9.1	9.0	8.4	8.6	8.1	7.8
Physics	5.7	5.6	5.3	5.6	5.4	5.7	5.5	5.9	5.6	5.4
Other physical sciences	.1	.1	.1	.1	.1	.1	.1	.1	.1	.0
Earth, atmospheric, and ocean sciences	3.0	3.4	3.3	3.2	3.4	3.2	3.0	3.2	3.0	2.9
Mathematics	3.8	3.6	3.9	3.9	4.3	4.2	4.5	4.3	4.4	4.1
Computer sciences	2.3	2.6	2.9	3.1	3.4	3.6	3.5	3.4	3.8	3.4
Biological sciences	19.6	20.0	19.6	19.3	19.5	19.7	20.2	20.0	20.4	21.2
Agricultural sciences	5.0	4.9	5.0	5.1	4.5	4.3	3.9	4.2	4.0	3.9
Psychology	15.6	14.5	14.2	14.2	13.4	13.1	13.4	12.8	12.9	12.9
Social sciences	15.7	15.2	15.1	14.6	14.8	14.6	14.8	14.8	14.5	14.6

See explanatory information, if any, and SOURCE at end of table.

Table 4a. Percentage distribution of science and engineering (S&E) doctorates awarded, by major field and citizenship status of recipients: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	U.S. citizens									
Science and engineering, total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Engineering, total	12.0	13.3	13.8	13.8	14.3	14.5	14.9	14.6	15.4	16.6
Aeronautical/astronautical	.5	.5	.5	.6	.7	.7	.8	.7	.9	1.1
Chemical	2.3	2.7	2.8	2.4	2.4	2.2	2.2	1.9	1.9	2.0
Civil	1.2	1.4	1.4	1.3	1.2	1.1	1.1	1.3	1.3	1.4
Electrical	2.5	3.0	3.3	3.5	3.8	4.1	4.2	4.2	4.4	4.5
Industrial	.3	.3	.4	.4	.3	.4	.6	.6	.7	.7
Materials/metallurgical	1.4	1.3	1.3	1.3	1.4	1.4	1.5	1.4	1.5	1.6
Mechanical	1.9	1.9	1.9	2.1	2.0	2.4	2.3	2.4	2.5	2.8
Other engineering	2.0	2.3	2.2	2.2	2.4	2.2	2.2	2.0	2.2	2.6
Sciences, total	88.0	86.7	86.2	86.2	85.7	85.5	85.1	85.4	84.6	83.4
Physical sciences, total	16.2	15.9	14.7	15.3	14.5	14.8	14.0	14.5	13.8	13.3
Astronomy	.6	.7	.6	.6	.6	.7	.7	.7	.8	.9
Chemistry	10.7	10.3	9.6	9.9	9.2	9.1	8.5	8.5	8.0	7.5
Physics	4.8	4.7	4.4	4.7	4.6	4.9	4.7	5.2	4.9	4.9
Other physical sciences	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
Earth, atmospheric, and ocean sciences	3.2	3.7	3.8	3.6	4.0	3.5	3.1	3.3	3.1	3.0
Mathematics	2.7	2.6	2.9	2.6	3.2	3.1	3.3	3.3	3.6	3.1
Computer sciences	1.9	2.1	2.5	2.5	2.7	2.9	2.8	2.8	3.1	2.7
Biological sciences	23.0	23.4	23.2	22.5	22.7	22.9	23.1	22.6	22.6	22.7
Agricultural sciences	4.5	4.0	4.5	4.4	3.9	3.5	3.1	3.4	3.2	3.0
Psychology	21.2	20.0	19.9	20.6	20.2	19.9	20.6	20.1	19.9	20.0
Social sciences	15.4	15.1	14.6	14.6	14.7	14.9	15.1	15.3	15.4	15.6
	Non-U.S. citizens									
Science and engineering, total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Engineering, total	34.0	34.4	35.4	34.3	33.8	33.3	33.4	33.1	33.1	32.5
Aeronautical/astronautical	1.2	1.0	1.4	1.2	1.1	1.3	1.1	1.1	1.0	1.0
Chemical	4.9	4.7	4.6	3.9	3.7	4.2	4.0	4.0	3.9	4.4
Civil	4.9	5.1	4.9	4.4	4.4	4.3	4.5	4.5	4.2	4.3
Electrical	6.9	8.6	9.2	9.1	9.2	8.9	8.9	9.5	9.5	9.0
Industrial	1.2	1.3	1.5	1.2	1.3	1.5	1.4	1.3	1.6	1.3
Materials/metallurgical	3.5	3.0	2.7	3.0	3.0	2.8	3.0	3.0	3.2	2.9
Mechanical	6.7	6.7	6.5	6.9	6.2	6.5	6.6	6.1	5.9	5.4
Other engineering	4.6	4.0	4.6	4.6	4.9	3.8	3.9	3.7	3.8	4.2
Sciences, total	66.0	65.6	64.6	65.7	66.2	66.7	66.6	66.9	66.9	67.5
Physical sciences, total	17.1	16.6	15.9	16.0	16.1	16.3	15.4	16.1	15.6	15.1
Astronomy	.4	.4	.5	.4	.4	.4	.4	.4	.5	.5
Chemistry	8.8	8.5	8.4	8.1	9.0	8.9	8.2	8.7	8.4	8.4
Physics	7.8	7.6	7.0	7.4	6.6	7.0	6.7	6.9	6.6	6.2
Other physical sciences	.1	.1	.0	.1	.1	.1	.1	.1	.1	.0
Earth, atmospheric, and ocean sciences	2.6	2.6	2.3	2.4	2.4	2.9	2.8	2.9	2.8	2.8
Mathematics	6.4	5.8	5.8	6.1	6.3	6.0	6.3	5.7	5.7	5.5
Computer sciences	3.1	3.6	3.6	4.2	4.5	4.6	4.4	4.4	4.7	4.3
Biological sciences	11.7	12.3	12.1	13.4	14.2	14.8	15.9	16.4	17.2	19.0
Agricultural sciences	6.1	6.9	6.1	6.4	5.5	5.6	5.1	5.2	5.1	5.0
Psychology	2.6	2.4	2.5	2.4	2.2	2.6	2.4	2.2	2.5	2.6
Social sciences	16.4	15.4	16.2	14.7	14.9	14.1	14.3	14.0	13.3	13.1

See explanatory information, if any, and SOURCE at end of table

Table 4a. Percentage distribution of science and engineering (S&E) doctorates awarded, by major field and citizenship status of recipients: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	Non-U.S. citizens with permanent visas									
Science and engineering, total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Engineering, total	32.6	32.4	32.5	32.5	30.2	29.7	28.6	27.7	27.2	26.3
Aeronautical/astronautical	.7	1.2	.7	.7	.9	.6	.4	.7	.4	.6
Chemical	5.1	4.4	5.5	4.2	4.0	4.3	3.2	2.9	2.6	2.5
Civil	3.8	4.1	5.2	5.1	3.1	3.7	3.6	2.9	2.9	3.1
Electrical	8.7	9.3	8.8	9.0	10.3	8.8	10.1	8.8	8.2	7.3
Industrial	1.2	1.0	.7	1.1	1.4	1.4	1.0	1.0	1.2	1.0
Materials/metallurgical	3.5	2.4	1.9	2.2	2.3	2.5	2.4	2.6	3.2	3.1
Mechanical	6.2	6.3	5.9	5.8	4.8	5.4	5.3	5.9	5.1	5.1
Other engineering	5.4	3.7	3.7	4.5	3.5	3.0	2.7	2.9	3.6	3.8
Sciences, total	67.4	67.6	67.5	67.5	69.8	70.3	71.4	72.3	72.8	73.7
Physical sciences, total	13.5	12.3	13.1	14.4	14.0	14.5	14.4	19.6	20.1	16.4
Astronomy	.1	.6	.4	.3	.2	.4	.3	.3	.6	.4
Chemistry	8.4	6.5	7.6	8.3	8.6	8.2	7.8	10.8	11.0	9.7
Physics	5.1	4.9	5.1	5.4	5.3	5.9	6.2	8.4	8.4	6.2
Other physical sciences	.0	.4	.1	.3	.0	.0	.1	.1	.1	.0
Earth, atmospheric, and ocean sciences	2.3	2.4	2.6	1.6	2.0	2.5	2.5	3.5	3.3	3.2
Mathematics	4.7	3.9	3.1	3.9	4.3	3.8	5.7	5.1	6.2	5.3
Computer sciences	2.9	3.7	5.2	4.6	4.9	4.8	5.1	3.9	3.8	3.1
Biological sciences	14.7	17.0	16.2	15.8	16.4	17.4	18.5	22.0	23.8	27.2
Agricultural sciences	4.4	6.3	4.0	4.8	4.4	4.5	3.0	3.2	3.0	3.4
Psychology	5.4	5.4	4.8	6.1	5.1	6.2	5.5	2.8	2.9	3.5
Social sciences	19.5	16.6	18.6	16.4	18.8	16.6	16.7	12.2	9.7	11.7
	Non-U.S. citizens with temporary visas									
Science and engineering, total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Engineering, total	34.3	34.9	36.0	34.7	34.5	33.9	34.3	35.3	36.1	34.8
Aeronautical/astronautical	1.3	1.0	1.6	1.3	1.2	1.4	1.2	1.3	1.3	1.2
Chemical	4.8	4.8	4.4	3.8	3.7	4.2	4.1	4.5	4.5	5.1
Civil	5.2	5.4	4.9	4.3	4.6	4.4	4.7	5.1	4.8	4.7
Electrical	6.9	8.5	9.2	9.2	9.0	9.0	8.7	9.8	10.2	9.6
Industrial	1.3	1.3	1.7	1.2	1.2	1.5	1.5	1.4	1.9	1.5
Materials/metallurgical	3.6	3.1	2.8	3.2	3.2	2.9	3.1	3.1	3.2	2.8
Mechanical	6.8	6.7	6.6	7.1	6.5	6.6	6.8	6.1	6.2	5.5
Other engineering	4.4	4.1	4.8	4.6	5.1	4.0	4.2	4.0	3.9	4.4
Sciences, total	65.7	65.1	64.0	65.3	65.5	66.1	65.7	64.7	63.9	65.2
Physical sciences, total	17.9	17.6	16.5	16.3	16.5	16.6	15.6	14.7	13.3	14.6
Astronomy	.5	.4	.5	.5	.5	.3	.4	.4	.4	.5
Chemistry	8.9	9.0	8.6	8.1	9.0	9.0	8.3	7.9	7.0	7.9
Physics	8.4	8.2	7.4	7.7	6.9	7.2	6.8	6.3	5.7	6.2
Other physical sciences	.1	.1	.0	.1	.1	.1	.0	.1	.1	.0
Earth, atmospheric, and ocean sciences	2.7	2.7	2.3	2.6	2.4	2.9	2.9	2.6	2.5	2.6
Mathematics	6.8	6.2	6.4	6.5	6.6	6.3	6.4	6.0	5.5	5.7
Computer sciences	3.2	3.6	3.3	4.1	4.4	4.5	4.3	4.6	5.2	4.8
Biological sciences	11.0	11.3	11.3	13.0	13.9	14.3	15.4	14.1	13.9	15.9
Agricultural sciences	6.5	7.0	6.6	6.7	5.7	5.8	5.5	6.0	6.1	5.7
Psychology	1.9	1.7	2.0	1.8	1.7	1.9	1.8	2.0	2.3	2.3
Social sciences	15.7	15.1	15.7	14.4	14.3	13.6	13.9	14.8	15.1	13.6

See explanatory information, if any, and SOURCE at end of table.

Table 4a. Percentage distribution of science and engineering (S&E) doctorates awarded, by major field and citizenship status of recipients: 1987-96

Field of study	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	Citizenship unknown									
Science and engineering, total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Engineering, total	19.5	21.4	21.4	29.0	22.9	27.3	28.7	23.3	26.1	25.7
Aeronautical/astronautical	.8	1.4	.7	1.7	.4	3.0	1.2	.8	.9	1.2
Chemical	1.3	2.7	1.8	1.7	2.4	1.2	3.2	1.8	1.7	.9
Civil	3.0	2.1	1.7	3.0	1.9	3.4	2.2	1.4	1.8	2.9
Electrical	5.5	5.9	5.7	8.0	6.2	6.1	5.9	7.8	8.8	8.1
Industrial	.5	.7	.7	.3	.6	.6	.8	.0	.7	.7
Materials/metallurgical	1.4	1.5	1.9	1.7	1.7	2.5	2.5	1.8	2.4	2.0
Mechanical	3.4	3.7	4.4	5.5	4.9	3.6	5.5	3.6	4.6	4.2
Other engineering	3.6	3.4	4.5	7.1	4.7	6.9	7.3	6.0	5.1	5.6
Sciences, total	80.5	78.6	78.6	71.0	77.1	72.7	71.3	76.7	73.9	74.2
Physical sciences, total	14.2	14.8	13.7	11.8	14.7	12.2	14.0	16.3	12.8	16.4
Astronomy	.3	.4	.3	.2	.4	.0	.0	.0	.7	.1
Chemistry	7.6	8.1	7.2	7.8	9.4	6.9	8.2	8.9	8.3	9.2
Physics	5.8	5.9	6.1	3.5	4.7	5.0	5.7	6.6	3.9	7.0
Other physical sciences	.6	.4	.2	.2	.2	.3	.1	.8	.0	.0
Earth, atmospheric, and ocean sciences	3.3	2.9	3.1	3.4	2.6	2.7	4.2	2.8	2.4	3.9
Mathematics	3.1	3.9	4.9	4.9	3.2	6.2	5.2	2.6	5.8	4.4
Computer sciences	2.3	.9	2.2	3.3	1.9	2.3	3.0	3.4	2.9	4.0
Biological sciences	15.0	15.5	11.9	10.2	14.1	11.2	12.4	11.5	14.3	14.7
Agricultural sciences	4.0	4.0	4.6	5.0	3.8	2.8	2.0	1.8	1.7	2.4
Psychology	20.6	17.4	20.9	18.4	21.2	18.9	14.7	18.5	14.9	10.5
Social sciences	18.0	19.3	17.4	13.8	15.6	16.4	15.9	19.7	18.2	18.0

SOURCE: National Science Foundation/SRS, Survey of Earned Doctorates

Table 5. Non-U.S. citizens awarded science and engineering (S&E) doctorates, by country of citizenship, visa type, and year of doctorate: 1987-96

Country of citizenship	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	Total non-U.S. citizens, S&E									
Total foreign citizenship	5,557	6,066	6,515	7,768	8,926	9,475	9,754	10,542	10,503	10,809
North America, total	318	355	403	446	525	515	506	547	505	530
Canada	181	203	220	253	297	304	285	275	274	276
Caribbean	23	28	29	36	54	44	38	61	60	51
Central America	28	32	34	53	46	52	44	69	43	45
Mexico	86	92	120	104	128	115	139	142	128	158
South America, total	311	294	297	343	387	394	394	408	359	455
Argentina	28	38	43	65	62	86	53	56	49	66
Brazil	112	94	100	100	119	133	151	157	137	205
Chile	45	45	47	50	54	48	52	42	38	36
Colombia	27	46	27	40	49	37	35	48	45	42
South America, other	99	71	80	88	103	90	103	105	90	106
Europe, total	625	691	709	801	972	950	1,104	1,150	1,254	1,258
Belgium	16	21	15	31	43	42	24	21	32	25
England, United Kingdom	96	116	96	100	132	137	154	128	132	117
France	48	53	51	65	67	77	93	96	83	68
Germany	74	78	102	123	118	124	164	196	208	170
Europe, other	391	423	445	482	612	570	669	709	799	878
East Asia, total	1,970	2,242	2,563	3,604	4,486	4,865	5,010	5,484	5,487	5,594
Taiwan	790	786	857	1,012	1,127	1,242	1,213	1,301	1,240	1,149
China, People's Republic of	293	480	620	1,150	1,793	2,045	2,227	2,531	2,752	2,952
Hong Kong	87	81	93	94	121	109	109	95	90	109
Japan	83	104	106	147	125	132	132	182	155	167
Korea	549	621	753	979	1,114	1,127	1,123	1,150	1,005	979
Thailand	95	98	76	111	93	87	77	97	113	119
East Asia, other	73	72	58	111	113	123	129	128	132	119
West Asia, total	1,231	1,233	1,308	1,654	1,670	1,891	1,903	2,077	2,181	2,139
India	503	520	536	711	752	861	933	1,065	1,207	1,258
Iran	182	173	198	258	227	200	203	174	173	147
Iraq	44	36	24	27	24	34	17	22	14	9
Israel	67	66	69	79	89	87	89	109	86	84
Lebanon	43	39	51	45	55	62	50	73	56	53
Saudi Arabia	50	52	61	63	67	76	46	76	71	74
Turkey	86	81	78	106	100	132	136	144	166	146
West Asia, other	256	266	291	365	356	439	429	414	408	368
Pacific/Australasia, total	137	156	166	175	216	220	227	231	231	232
Australia	42	39	41	46	35	40	47	56	61	42
Indonesia	43	43	52	53	69	78	78	83	83	69
New Zealand	14	17	27	16	23	16	24	15	26	32
Philippines	36	56	45	59	89	83	74	75	59	89
Pacific/Australasia, other	2	1	1	1	0	3	4	2	2	0
Africa, total	408	450	446	539	500	510	474	583	423	441
Egypt	98	115	109	160	112	101	88	104	78	89
Nigeria	89	87	59	83	83	68	55	60	53	39
Africa, other	221	248	278	296	305	341	331	419	292	313
Country unknown	557	645	623	206	170	130	136	62	63	160

See explanatory information, if any, and SOURCE at end of table.

Table 5. Non-U.S. citizens awarded science and engineering (S&E) doctorates, by country of citizenship, visa type, and year of doctorate: 1987-96

Country of citizenship	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	Total non-U.S. citizens, engineering									
Total foreign citizenship	1,887	2,087	2,305	2,666	3,021	3,154	3,253	3,491	3,480	3,508
North America, total	62	63	76	84	84	73	82	90	82	96
Canada	29	28	38	41	54	46	42	36	41	45
Caribbean	6	2	5	7	3	5	4	14	7	8
Central America	6	6	5	11	5	6	9	10	8	6
Mexico	21	27	28	25	22	16	27	30	26	37
South America, total	79	69	73	84	86	87	97	111	88	117
Argentina	9	6	6	12	12	14	10	7	7	8
Brazil	38	25	30	31	34	31	46	49	46	65
Chile	10	9	9	11	8	10	5	8	8	8
Colombia	7	9	5	8	11	9	8	12	10	7
South America, other	15	20	23	22	21	23	28	35	17	29
Europe, total	152	171	198	205	200	202	244	257	297	235
Belgium	6	6	5	12	9	10	7	7	12	4
England, United Kingdom	9	11	14	14	14	17	18	14	20	10
France	16	22	18	27	19	25	32	32	24	25
Germany	7	11	17	15	8	18	23	29	37	16
Europe, other	114	121	144	137	150	132	164	175	204	180
East Asia, total	803	889	988	1,266	1,629	1,701	1,733	1,887	1,869	1,849
Taiwan	397	400	427	476	597	637	592	670	616	572
China, People's Republic of	86	132	159	328	477	508	543	656	773	801
Hong Kong	22	33	38	30	30	37	32	14	20	31
Japan	15	24	19	17	29	25	23	46	30	32
Korea	238	257	308	360	435	437	484	429	344	323
Thailand	20	24	16	21	20	21	18	34	38	43
East Asia, other	25	19	21	34	41	36	41	38	48	47
West Asia, total	477	532	577	740	768	863	889	908	961	981
India	204	255	251	314	357	405	448	480	572	618
Iran	88	81	110	139	123	110	95	92	85	66
Iraq	10	8	9	14	11	14	6	9	8	2
Israel	20	25	19	22	27	26	23	17	19	20
Lebanon	27	19	25	35	38	37	27	45	31	21
Saudi Arabia	16	14	26	22	26	31	19	28	25	34
Turkey	43	42	52	59	64	81	74	64	73	72
West Asia, other	69	89	85	135	122	159	197	173	148	148
Pacific/Australasia, total	24	24	26	25	45	48	43	50	44	38
Australia	5	2	2	3	7	11	6	11	7	6
Indonesia	13	11	12	14	19	24	29	28	29	15
New Zealand	2	4	3	2	2	1	0	1	3	2
Philippines	4	7	9	6	17	11	7	9	5	15
Pacific/Australasia, other	0	0	0	0	0	1	1	1	0	0
Africa, total	107	138	140	187	155	138	121	168	122	143
Egypt	40	47	49	82	57	46	48	63	48	59
Nigeria	16	21	11	23	20	11	12	6	14	11
Africa, other	51	70	80	82	78	81	61	99	60	73
Country unknown	183	201	227	75	54	42	44	20	17	49

See explanatory information, if any, and SOURCE at end of table.

Table 5. Non-U.S. citizens awarded science and engineering (S&E) doctorates, by country of citizenship, visa type, and year of doctorate: 1987-96

Country of citizenship	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	Total non-U.S. citizens, sciences									
Total foreign citizenship	3,670	3,979	4,210	5,102	5,905	6,321	6,501	7,051	7,023	7,301
North America, total	256	292	327	362	441	442	424	457	423	434
Canada	152	175	182	212	243	258	243	239	233	231
Caribbean	17	26	24	29	51	39	34	47	53	43
Central America	22	26	29	42	41	46	35	59	35	39
Mexico	65	65	92	79	106	99	112	112	102	121
South America, total	232	225	224	259	301	307	297	297	271	338
Argentina	19	32	37	53	50	72	43	49	42	58
Brazil	74	69	70	69	85	102	105	108	91	140
Chile	35	36	38	39	46	38	47	34	30	28
Colombia	20	37	22	32	38	28	27	36	35	35
South America, other	84	51	57	66	82	67	75	70	73	77
Europe, total	473	520	511	596	772	748	860	893	957	1,023
Belgium	10	15	10	19	34	32	17	14	20	21
England, United Kingdom	87	105	82	86	118	120	136	114	112	107
France	32	31	33	38	48	52	61	64	59	43
Germany	67	67	85	108	110	106	141	167	171	154
Europe, other	277	302	301	345	462	438	505	534	595	698
East Asia, total	1,167	1,353	1,575	2,338	2,857	3,164	3,277	3,597	3,618	3,745
Taiwan	393	386	430	536	530	605	621	631	624	577
China, People's Republic of	207	348	461	822	1,316	1,537	1,684	1,875	1,979	2,151
Hong Kong	65	48	55	64	91	72	77	81	70	78
Japan	68	80	87	130	96	107	109	136	125	135
Korea	311	364	445	619	679	690	639	721	661	656
Thailand	75	74	60	90	73	66	59	63	75	76
East Asia, other	48	53	37	77	72	87	88	90	84	72
West Asia, total	754	701	731	914	902	1,028	1,014	1,169	1,220	1,158
India	299	265	285	397	395	456	485	585	635	640
Iran	94	92	88	119	104	90	108	82	88	81
Iraq	34	28	15	13	13	20	11	13	6	7
Israel	47	41	50	57	62	61	66	92	67	64
Lebanon	16	21	26	10	17	25	23	28	25	32
Saudi Arabia	34	38	35	41	41	45	27	48	46	40
Turkey	43	39	26	47	36	51	62	80	93	74
West Asia, other	187	177	206	230	234	280	232	241	260	220
Pacific/Australasia, total	113	132	140	150	171	172	184	181	187	194
Australia	37	37	39	43	28	29	41	45	54	36
Indonesia	30	32	40	39	50	54	49	55	54	54
New Zealand	12	13	24	14	21	15	24	14	23	30
Philippines	32	49	36	53	72	72	67	66	54	74
Pacific/Australasia, other	2	1	1	1	0	2	3	1	2	0
Africa, total	301	312	306	352	345	372	353	415	301	298
Egypt	58	68	60	78	55	55	40	41	30	30
Nigeria	73	66	48	60	63	57	43	54	39	28
Africa, other	170	178	198	214	227	260	270	320	232	240
Country unknown	374	444	396	131	116	88	92	42	46	111

See explanatory information, if any, and SOURCE at end of table.

Table 5. Non-U.S. citizens awarded science and engineering (S&E) doctorates, by country of citizenship, visa type, and year of doctorate: 1987-96

Country of citizenship	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	Permanent visas, S&E									
Total foreign citizenship	1,089	1,130	1,124	1,197	1,285	1,383	1,641	3,021	3,509	3,007
North America, total	62	87	88	99	126	118	120	119	135	119
Canada	40	53	55	55	75	76	71	58	78	70
Caribbean	6	15	8	16	19	16	15	28	26	27
Central America	6	4	9	11	11	8	6	14	8	2
Mexico	10	15	16	17	21	18	28	19	23	20
South America, total	44	48	41	67	62	74	63	64	51	64
Argentina	4	8	4	11	16	17	17	13	9	17
Brazil	9	5	9	13	8	21	11	16	11	11
Chile	7	5	6	7	6	6	7	4	9	5
Colombia	5	14	7	11	11	9	5	13	8	10
South America, other	19	16	15	25	21	21	23	18	14	21
Europe, total	151	171	159	179	211	210	258	275	284	312
Belgium	2	4	3	6	8	8	8	4	7	8
England, United Kingdom	31	46	36	38	52	58	47	56	49	50
France	11	11	14	15	12	10	19	16	15	16
Germany	29	22	24	38	25	39	45	62	53	51
Europe, other	78	88	82	82	114	95	139	137	160	187
East Asia, total	260	250	264	323	407	486	663	2,001	2,487	1,935
Taiwan	150	136	142	147	160	172	155	178	165	136
China, People's Republic of	22	26	36	54	100	162	352	1,642	2,169	1,628
Hong Kong	19	15	15	12	16	28	20	20	15	18
Japan	10	10	13	23	20	18	20	30	19	23
Korea	36	49	52	70	91	83	91	99	87	93
Thailand	13	5	4	2	8	9	11	11	10	14
East Asia, other	10	9	2	15	12	14	14	21	22	23
West Asia, total	262	244	279	346	287	340	359	375	383	389
India	87	84	94	119	108	148	142	173	168	199
Iran	79	77	93	125	83	82	100	65	84	74
Iraq	8	8	2	3	3	8	4	7	5	4
Israel	20	16	20	11	18	15	22	41	21	17
Lebanon	15	10	14	18	10	6	11	12	11	11
Saudi Arabia	3	4	6	6	2	7	4	7	4	10
Turkey	12	15	11	17	11	20	18	15	19	23
West Asia, other	38	30	39	47	52	54	58	55	71	51
Pacific/Australasia, total	27	29	19	25	34	23	35	40	43	32
Australia	13	11	8	12	9	9	10	13	10	13
Indonesia	5	5	5	3	9	5	6	13	16	3
New Zealand	4	6	1	4	5	1	4	5	3	4
Philippines	4	7	5	6	11	7	14	8	13	12
Pacific/Australasia, other	1	0	0	0	0	1	1	1	1	0
Africa, total	69	81	80	92	103	95	100	123	91	82
Egypt	9	18	13	14	13	9	9	12	12	11
Nigeria	26	25	20	30	35	34	30	33	32	17
Africa, other	34	38	47	48	55	52	61	78	47	54
Country unknown	214	220	194	66	55	37	43	24	35	74

See explanatory information, if any, and SOURCE at end of table

Table 5. Non-U.S. citizens awarded science and engineering (S&E) doctorates, by country of citizenship, visa type, and year of doctorate: 1987-96

Country of citizenship	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	Permanent visas, engineering									
Total foreign citizenship	355	366	365	389	388	411	469	838	956	792
North America, total	8	16	12	20	17	13	16	14	23	15
Canada	3	3	9	9	14	8	9	6	9	6
Caribbean	1	1	0	4	0	2	2	4	3	5
Central America	1	2	0	3	2	2	1	2	4	0
Mexico	3	5	3	4	1	1	4	2	7	4
South America, total	11	12	7	12	12	14	8	13	7	9
Argentina	1	0	0	2	5	4	2	1	1	3
Brazil	5	0	1	2	2	2	1	2	2	3
Chile	2	1	1	0	0	1	0	1	1	0
Colombia	0	5	2	1	1	2	1	4	1	1
South America, other	3	6	3	7	4	5	4	5	2	2
Europe, total	32	28	30	31	33	33	42	49	68	58
Belgium	0	2	0	1	1	2	2	1	1	1
England, United Kingdom	4	5	5	5	3	8	4	7	9	4
France	3	2	2	6	4	3	4	5	3	5
Germany	2	1	3	4	0	5	3	11	8	6
Europe, other	23	18	20	15	25	15	29	25	47	42
East Asia, total	115	112	105	128	166	163	221	576	696	515
Taiwan	76	71	67	69	88	80	73	89	76	77
China, People's Republic of	9	10	9	19	25	39	88	426	566	378
Hong Kong	9	5	5	5	7	10	10	7	5	9
Japan	2	2	1	1	5	3	2	5	2	2
Korea	14	22	22	30	36	25	43	42	34	36
Thailand	1	0	0	0	1	2	1	1	4	3
East Asia, other	4	2	1	4	4	4	4	6	9	10
West Asia, total	98	105	122	150	118	144	151	140	119	152
India	29	36	35	42	44	57	56	61	55	78
Iran	40	39	55	61	42	44	43	28	29	29
Iraq	1	3	1	1	0	2	2	5	3	0
Israel	4	6	2	3	4	5	6	6	0	0
Lebanon	10	7	7	13	4	4	6	5	3	8
Saudi Arabia	0	0	1	2	0	1	2	3	3	3
Turkey	7	8	5	10	5	10	6	6	7	12
West Asia, other	7	6	16	18	19	21	30	26	19	22
Pacific/Australasia, total	6	6	3	5	5	7	6	12	9	4
Australia	3	1	0	0	2	4	1	4	0	2
Indonesia	2	3	2	3	3	2	4	7	7	0
New Zealand	1	2	0	1	0	0	0	1	0	0
Philippines	0	0	1	1	0	0	1	0	2	2
Pacific/Australasia, other	0	0	0	0	0	1	0	0	0	0
Africa, total	12	17	17	21	25	23	14	28	28	24
Egypt	2	4	4	7	4	3	3	4	9	4
Nigeria	5	7	3	5	9	6	3	2	10	5
Africa, other	5	6	10	9	12	14	8	22	9	15
Country unknown	73	70	69	22	12	14	11	6	6	15

See explanatory information, if any, and SOURCE at end of table

Table 5. Non-U.S. citizens awarded science and engineering (S&E) doctorates, by country of citizenship, visa type, and year of doctorate: 1987-96

Country of citizenship	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	Permanent visas, sciences									
Total foreign citizenship	734	764	759	808	897	972	1,172	2,183	2,553	2,215
North America, total	54	71	76	79	109	105	104	105	112	104
Canada	37	45	46	46	61	68	62	52	69	64
Caribbean	5	14	8	12	19	14	13	24	23	22
Central America	5	2	9	8	9	6	5	12	4	2
Mexico	7	10	13	13	20	17	24	17	16	16
South America, total	33	36	34	55	50	60	55	51	44	55
Argentina	3	8	4	9	11	13	15	12	8	14
Brazil	4	5	8	11	6	19	10	14	9	8
Chile	5	4	5	7	6	5	7	3	8	5
Colombia	5	9	5	10	10	7	4	9	7	9
South America, other	16	10	12	18	17	16	19	13	12	19
Europe, total	119	143	129	148	178	177	216	226	216	254
Belgium	2	2	3	5	7	6	6	3	6	7
England, United Kingdom	27	41	31	33	49	50	43	49	40	46
France	8	9	12	9	8	7	15	11	12	11
Germany	27	21	21	34	25	34	42	51	45	45
Europe, other	55	70	62	67	89	80	110	112	113	145
East Asia, total	145	138	159	195	241	323	442	1,425	1,791	1,420
Taiwan	74	65	75	78	72	92	82	89	89	59
China, People's Republic of	13	16	27	35	75	123	264	1,216	1,603	1,250
Hong Kong	10	10	10	7	9	18	10	13	10	9
Japan	8	8	12	22	15	15	18	25	17	21
Korea	22	27	30	40	55	58	48	57	53	57
Thailand	12	5	4	2	7	7	10	10	6	11
East Asia, other	6	7	1	11	8	10	10	15	13	13
West Asia, total	164	139	157	196	169	196	208	235	264	237
India	58	48	59	77	64	91	86	112	113	121
Iran	39	38	38	64	41	38	57	37	55	45
Iraq	7	5	1	2	3	6	2	2	2	4
Israel	16	10	18	8	14	10	16	35	21	17
Lebanon	5	3	7	5	6	2	5	7	8	3
Saudi Arabia	3	4	5	4	2	6	2	4	1	7
Turkey	5	7	6	7	6	10	12	9	12	11
West Asia, other	31	24	23	29	33	33	28	29	52	29
Pacific/Australasia, total	21	23	16	20	29	16	29	28	34	28
Australia	10	10	8	12	7	5	9	9	10	11
Indonesia	3	2	3	0	6	3	2	6	9	3
New Zealand	3	4	1	3	5	1	4	4	3	4
Philippines	4	7	4	5	11	7	13	8	11	10
Pacific/Australasia, other	1	0	0	0	0	0	1	1	1	0
Africa, total	57	64	63	71	78	72	86	95	63	58
Egypt	7	14	9	7	9	6	6	8	3	7
Nigeria	21	18	17	25	26	28	27	31	22	12
Africa, other	29	32	37	39	43	38	53	56	38	39
Country unknown	141	150	125	44	43	23	32	18	29	59

See explanatory information, if any, and SOURCE at end of table.

Table 5. Non-U.S. citizens awarded science and engineering (S&E) doctorates, by country of citizenship, visa type, and year of doctorate: 1987–96

Country of citizenship	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	Temporary visas, S&E									
Total foreign citizenship	4,468	4,936	5,391	6,571	7,641	8,092	8,113	7,521	6,994	7,802
North America, total	256	268	315	347	399	397	386	428	370	411
Canada	141	150	165	198	222	228	214	217	196	206
Caribbean	17	13	21	20	35	28	23	33	34	24
Central America	22	28	25	42	35	44	38	55	35	43
Mexico	76	77	104	87	107	97	111	123	105	138
South America, total	267	246	256	276	325	320	331	344	308	391
Argentina	24	30	39	54	46	69	36	43	40	49
Brazil	103	89	91	87	111	112	140	141	126	194
Chile	38	40	41	43	48	42	45	38	29	31
Colombia	22	32	20	29	38	28	30	35	37	32
South America, other	80	55	65	63	82	69	80	87	76	85
Europe, total	474	520	550	622	761	740	846	875	970	946
Belgium	14	17	12	25	35	34	16	17	25	17
England, United Kingdom	65	70	60	62	80	79	107	72	83	67
France	37	42	37	50	55	67	74	60	68	52
Germany	45	56	78	85	93	85	119	134	155	119
Europe, other	313	335	363	400	498	475	530	572	639	691
East Asia, total	1,710	1,992	2,299	3,281	4,079	4,379	4,347	3,483	3,000	3,659
Taiwan	640	650	715	865	967	1,070	1,058	1,123	1,075	1,013
China, People's Republic of	271	454	584	1,096	1,693	1,883	1,875	889	583	1,324
Hong Kong	68	66	78	82	105	81	89	75	75	91
Japan	73	94	93	124	105	114	112	152	136	144
Korea	513	572	701	909	1,023	1,044	1,032	1,051	918	886
Thailand	82	93	72	109	85	78	66	86	103	105
East Asia, other	63	63	56	96	101	109	115	107	110	96
West Asia, total	969	989	1,029	1,308	1,383	1,551	1,544	1,702	1,798	1,750
India	416	436	442	592	644	713	791	892	1,039	1,059
Iran	103	96	105	133	144	118	103	109	89	73
Iraq	36	28	22	24	21	26	13	15	9	5
Israel	47	50	49	68	71	72	67	68	65	67
Lebanon	28	29	37	27	45	56	39	61	45	42
Saudi Arabia	47	48	55	57	65	69	42	60	67	64
Turkey	74	66	67	89	89	112	118	129	147	123
West Asia, other	218	236	252	318	304	385	371	359	337	317
Pacific/Australasia, total	110	127	147	150	182	197	192	191	188	200
Australia	29	28	33	34	26	31	37	43	51	29
Indonesia	38	38	47	50	60	73	72	70	67	66
New Zealand	10	11	26	12	18	15	20	10	23	28
Philippines	32	49	40	53	78	76	60	67	46	77
Pacific/Australasia, other	1	1	1	1	0	2	3	1	1	0
Africa, total	339	369	366	447	397	415	374	460	332	359
Egypt	89	97	96	146	99	92	79	92	66	78
Nigeria	63	62	39	53	48	34	25	27	21	22
Africa, other	187	210	231	248	250	289	270	341	245	259
Country unknown	343	425	429	140	115	93	93	38	28	86

See explanatory information, if any, and SOURCE at end of table

Table 5. Non-U.S. citizens awarded science and engineering (S&E) doctorates, by country of citizenship, visa type, and year of doctorate: 1987-96

Country of citizenship	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	Temporary visas, engineering									
Total foreign citizenship	1,532	1,721	1,940	2,277	2,633	2,743	2,784	2,653	2,524	2,716
North America, total	54	47	64	64	67	60	66	76	59	81
Canada	26	20	29	32	40	38	33	30	32	39
Caribbean	5	1	5	3	3	3	2	10	4	3
Central America	5	4	5	8	3	4	8	8	4	6
Mexico	18	22	25	21	21	15	23	28	19	33
South America, total	68	57	66	72	74	73	89	98	81	108
Argentina	8	6	6	10	7	10	8	6	6	5
Brazil	33	25	29	29	32	29	45	47	44	62
Chile	8	8	8	11	8	9	5	7	7	8
Colombia	7	4	3	7	10	7	7	8	9	6
South America, other	12	14	20	15	17	18	24	30	15	27
Europe, total	120	143	168	174	167	169	202	208	229	177
Belgium	6	4	5	11	8	8	5	6	11	3
England, United Kingdom	5	6	9	9	11	9	14	7	11	6
France	13	20	16	21	15	22	28	27	21	20
Germany	5	10	14	11	8	13	20	18	29	10
Europe, other	91	103	124	122	125	117	135	150	157	138
East Asia, total	688	777	883	1,138	1,463	1,538	1,512	1,311	1,173	1,334
Taiwan	321	329	360	407	509	557	519	581	540	495
China, People's Republic of	77	122	150	309	452	469	455	230	207	423
Hong Kong	13	28	33	25	23	27	22	7	15	22
Japan	13	22	18	16	24	22	21	41	28	30
Korea	224	235	286	330	399	412	441	387	310	287
Thailand	19	24	16	21	19	19	17	33	34	40
East Asia, other	21	17	20	30	37	32	37	32	39	37
West Asia, total	379	427	455	580	650	719	738	768	842	829
India	175	219	216	272	313	348	392	419	517	540
Iran	48	42	55	78	81	66	52	64	56	37
Iraq	9	5	8	13	11	12	4	4	5	2
Israel	16	19	17	19	23	21	17	11	19	20
Lebanon	17	11	18	22	34	33	21	40	28	13
Saudi Arabia	16	14	25	20	26	30	17	25	22	31
Turkey	36	34	47	49	59	71	66	58	66	60
West Asia, other	62	83	69	117	103	138	167	147	129	126
Pacific/Australasia, total	18	18	23	20	40	41	37	38	35	34
Australia	2	1	2	3	5	7	5	7	7	4
Indonesia	11	8	10	11	16	22	25	21	22	15
New Zealand	1	2	3	1	2	1	0	0	3	2
Philippines	4	7	8	5	17	11	6	9	3	13
Pacific/Australasia, other	0	0	0	0	0	0	1	1	0	0
Africa, total	95	121	123	166	130	115	107	140	94	119
Egypt	38	43	45	75	53	43	45	59	39	55
Nigeria	11	14	8	18	11	5	9	4	4	6
Africa, other	46	64	70	73	66	67	53	77	51	58
Country unknown	110	131	158	53	42	28	33	14	11	34

See explanatory information, if any, and SOURCE at end of table.

Table 5. Non-U.S. citizens awarded science and engineering (S&E) doctorates, by country of citizenship, visa type, and year of doctorate: 1987-96

Country of citizenship	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	Temporary visas, sciences									
Total foreign citizenship	2,936	3,215	3,451	4,294	5,008	5,349	5,329	4,868	4,470	5,086
North America, total	202	221	251	283	332	337	320	352	311	330
Canada	115	130	136	166	182	190	181	187	164	167
Caribbean	12	12	16	17	32	25	21	23	30	21
Central America	17	24	20	34	32	40	30	47	31	37
Mexico	58	55	79	66	86	82	88	95	86	105
South America, total	199	189	190	204	251	247	242	246	227	283
Argentina	16	24	33	44	39	59	28	37	34	44
Brazil	70	64	62	58	79	83	95	94	82	132
Chile	30	32	33	32	40	33	40	31	22	23
Colombia	15	28	17	22	28	21	23	27	28	26
South America, other	68	41	45	48	65	51	56	57	61	58
Europe, total	354	377	382	448	594	571	644	667	741	769
Belgium	8	13	7	14	27	26	11	11	14	14
England, United Kingdom	60	64	51	53	69	70	93	65	72	61
France	24	22	21	29	40	45	46	53	47	32
Germany	40	46	64	74	85	72	99	116	126	109
Europe, other	222	232	239	278	373	358	395	422	482	553
East Asia, total	1,022	1,215	1,416	2,143	2,616	2,841	2,835	2,172	1,827	2,325
Taiwan	319	321	355	458	458	513	539	542	535	518
China, People's Republic of	194	332	434	787	1,241	1,414	1,420	659	376	901
Hong Kong	55	38	45	57	82	54	67	68	60	69
Japan	60	72	75	108	81	92	91	111	108	114
Korea	289	337	415	579	624	632	591	664	608	599
Thailand	63	69	56	88	66	59	49	53	69	65
East Asia, other	42	46	36	66	64	77	78	75	71	59
West Asia, total	590	562	574	718	733	832	806	934	956	921
India	241	217	226	320	331	365	399	473	522	519
Iran	55	54	50	55	63	52	51	45	33	36
Iraq	27	23	14	11	10	14	9	11	4	3
Israel	31	31	32	49	48	51	50	57	46	47
Lebanon	11	18	19	5	11	23	18	21	17	29
Saudi Arabia	31	34	30	37	39	39	25	44	45	33
Turkey	38	32	20	40	30	41	50	71	81	63
West Asia, other	156	153	183	201	201	247	204	212	208	191
Pacific/Australasia, total	92	109	124	130	142	156	155	153	153	166
Australia	27	27	31	31	21	24	32	36	44	25
Indonesia	27	30	37	39	44	51	47	49	45	51
New Zealand	9	9	23	11	16	14	20	10	20	26
Philippines	28	42	32	48	61	65	54	58	43	64
Pacific/Australasia, other	1	1	1	1	0	2	2	0	1	0
Africa, total	244	248	243	281	267	300	267	320	238	240
Egypt	51	54	51	71	46	49	34	33	27	23
Nigeria	52	48	31	35	37	29	16	23	17	16
Africa, other	141	146	161	175	184	222	217	264	194	201
Country unknown	233	294	271	87	73	65	60	24	17	52

SOURCE: National Science Foundation/SRS, Survey of Earned Doctorates

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Table 6. Institutions conferring science and engineering (S&E) doctorates, by State, institution, and major field: 1996

[To increase readability, fields span 2 pages and institutions are repeated on facing pages]

State and institution	S&E rank	Total S&E	Engineering						Physical sciences			
			Total	Chemical	Civil	Electrical	Mechanical	Other engineering	Total	Physics & astronomy	Chemistry	Other physical sciences
Total, all institutions		27,230	6,305	798	697	1,740	1,052	2,018	3,838	1,677	2,148	13
Alabama, total	25	314	78	8	6	14	18	32	46	26	20	0
Alabama A&M University	150	5	0	0	0	0	0	0	1	1	0	0
Auburn University	65	120	37	8	5	3	12	9	11	4	7	0
United States Sports Academy	155	0	0	0	0	0	0	0	0	0	0	0
University of Alabama	98	59	10	0	1	2	0	7	14	3	11	0
University of Alabama Birmingham	81	82	9	0	0	1	0	8	8	6	2	0
University of Alabama Huntsville	115	41	22	0	0	8	6	8	12	12	0	0
University of South Alabama	148	7	0	0	0	0	0	0	0	0	0	0
Alaska, total	48	28	1	0	1	0	0	0	4	4	0	0
University of Alaska Fairbanks	128	28	1	0	1	0	0	0	4	4	0	0
Arizona, total	19	465	130	6	19	36	11	58	79	45	31	3
Arizona State University Main	41	183	65	5	11	18	5	26	26	11	15	0
Northern Arizona University	145	10	0	0	0	0	0	0	0	0	0	0
University of Arizona	21	272	65	1	8	18	6	32	53	34	16	3
Arkansas, total	40	65	15	2	0	8	0	5	9	5	4	0
Arkansas State U Main Campus	155	0	0	0	0	0	0	0	0	0	0	0
U of Arkansas Little Rock	153	2	2	0	0	1	0	1	0	0	0	0
U of Arkansas for Med Sciences	148	7	0	0	0	0	0	0	0	0	0	0
U of Arkansas	101	56	13	2	0	7	0	4	9	5	4	0
California, total	1	3,385	789	65	84	289	136	215	485	214	269	2
Biola University	143	12	0	0	0	0	0	0	0	0	0	0
CA Inst Integral Studies	150	5	0	0	0	0	0	0	0	0	0	0
CA Inst Technology	50	164	62	15	4	19	9	15	55	25	29	1
CA Sch Prof Psych Fresno	115	41	0	0	0	0	0	0	0	0	0	0
CA Sch Prof Psych Los Angeles	111	46	0	0	0	0	0	0	0	0	0	0
CA Sch Prof Psych San Diego	88	72	0	0	0	0	0	0	0	0	0	0
CA Sch Prof Psych Berkeley	98	59	0	0	0	0	0	0	0	0	0	0
Claremont Graduate School	124	32	0	0	0	0	0	0	0	0	0	0
Fielding Institute	108	49	0	0	0	0	0	0	0	0	0	0
Fuller Theological Seminary CA	127	29	0	0	0	0	0	0	0	0	0	0
Golden Gate Baptist Seminary	155	0	0	0	0	0	0	0	0	0	0	0
Graduate Theological Union	152	3	0	0	0	0	0	0	0	0	0	0
Hebrew Union Col CA Branch	155	0	0	0	0	0	0	0	0	0	0	0
Loma Linda U La Sierra Campus	155	0	0	0	0	0	0	0	0	0	0	0
Loma Linda University	147	8	0	0	0	0	0	0	0	0	0	0
Naval Postgraduate School	146	9	3	0	0	2	0	1	1	1	0	0
Pacific Grad School of Psych	126	30	0	0	0	0	0	0	0	0	0	0
Pepperdine University	155	0	0	0	0	0	0	0	0	0	0	0
Rand Grad Sch of Policy Studies	149	6	0	0	0	0	0	0	0	0	0	0
San Diego State University	133	22	3	0	0	0	0	3	0	0	0	0
Santa Clara University	154	1	1	0	0	1	0	0	0	0	0	0
Saybrook Institute	133	22	0	0	0	0	0	0	0	0	0	0
School of Theology at Claremont	155	0	0	0	0	0	0	0	0	0	0	0
Scripps Research Institute	140	15	0	0	0	0	0	0	8	0	8	0
Stanford University	9	442	193	16	18	60	33	66	67	34	33	0
United States International U	132	23	1	0	0	0	0	1	0	0	0	0
University of the Pacific	155	0	0	0	0	0	0	0	0	0	0	0
U of California Berkeley	1	566	182	13	27	53	45	44	96	34	62	0
U of California Davis	13	344	76	2	11	17	16	30	41	15	26	0
U of California Irvine	56	148	27	1	8	9	5	4	26	9	17	0
U of California Los Angeles	12	364	64	4	9	29	9	13	48	24	24	0
U of California Riverside	92	66	0	0	0	0	0	0	13	9	4	0
U of California San Diego	36	203	40	2	1	20	7	10	39	19	20	0
U of California San Francisco	93	65	1	0	0	0	0	1	9	0	9	0
U of California Santa Barbara	47	168	51	7	0	25	9	10	34	22	12	0
U of California Santa Cruz	83	77	7	0	0	7	0	0	23	13	9	1
University of La Verne	155	0	0	0	0	0	0	0	0	0	0	0
University of San Diego	155	0	0	0	0	0	0	0	0	0	0	0
University of San Francisco	155	0	0	0	0	0	0	0	0	0	0	0
University of Southern CA	26	261	78	5	6	47	3	17	25	9	16	0
Wright Institute, All Campuses	123	33	0	0	0	0	0	0	0	0	0	0

See explanatory information, if any, and SOURCE at end of table.

Table 6. Institutions conferring science and engineering (S&E) doctorates, by State, institution, and major field: 1996

[To increase readability, fields span 2 pages and institutions are repeated on facing pages]

State and institution	Earth, atmos., & ocean sciences	Mathematics	Computer sciences	Biological & agricultural sciences			Psychology	Social sciences	Non-S&E, total	Grand total, all fields
				Total	Biological	Agricultural				
Total, all institutions	794	1,122	921	6,760	5,723	1,037	3,491	3,999	15,185	42,415
Alabama, total	2	14	9	98	77	21	41	26	220	534
Alabama A&M University	0	0	0	4	0	4	0	0	3	8
Auburn University	0	4	2	31	14	17	21	14	31	151
United States Sports Academy	0	0	0	0	0	0	0	0	1	1
University of Alabama	0	5	2	5	5	0	12	11	138	197
University of Alabama Birmingham	0	2	3	51	51	0	8	1	46	128
University of Alabama Huntsville	2	3	2	0	0	0	0	0	0	41
University of South Alabama	0	0	0	7	7	0	0	0	1	8
Alaska, total	7	1	0	13	8	5	1	1	0	28
University of Alaska Fairbanks	7	1	0	13	8	5	1	1	0	28
Arizona, total	26	22	13	87	68	19	35	73	292	757
Arizona State University Main	2	11	9	20	20	0	18	32	134	317
Northern Arizona University	0	0	0	6	6	0	0	4	47	57
University of Arizona	24	11	4	61	42	19	17	37	111	383
Arkansas, total	0	3	0	31	11	20	6	1	82	147
Arkansas State U Main Campus	0	0	0	0	0	0	0	0	3	3
U of Arkansas Little Rock	0	0	0	0	0	0	0	0	18	20
U of Arkansas for Med Sciences	0	0	0	7	7	0	0	0	0	7
U of Arkansas	0	3	0	24	4	20	6	1	61	117
California, total	108	146	99	724	689	35	577	457	1,383	4,768
Biola University	0	0	0	0	0	0	12	0	10	22
CA Inst Integral Studies	0	0	0	1	1	0	4	0	0	5
CA Inst Technology	11	8	1	24	24	0	0	3	0	164
CA Sch Prof Psych Fresno	0	0	0	0	0	0	41	0	0	41
CA Sch Prof Psych Los Angeles	0	0	0	0	0	0	46	0	0	46
CA Sch Prof Psych San Diego	0	0	0	0	0	0	72	0	0	72
CA Sch Prof Psych Berkeley	0	0	0	0	0	0	59	0	0	59
Claremont Graduate School	0	2	5	0	0	0	8	17	69	101
Fielding Institute	0	0	0	0	0	0	44	5	19	68
Fuller Theological Seminary CA	0	0	0	0	0	0	22	7	9	38
Golden Gate Baptist Seminary	0	0	0	0	0	0	0	0	5	5
Graduate Theological Union	0	0	0	0	0	0	3	0	20	23
Hebrew Union Col CA Branch	0	0	0	0	0	0	0	0	3	3
Loma Linda U La Sierra Campus	0	0	0	0	0	0	0	0	5	5
Loma Linda University	0	0	0	8	8	0	0	0	0	8
Naval Postgraduate School	2	0	3	0	0	0	0	0	0	9
Pacific Grad School of Psych	0	0	0	0	0	0	30	0	4	34
Pepperdine University	0	0	0	0	0	0	0	0	26	26
Rand Grad Sch of Policy Studies	0	0	0	0	0	0	0	6	0	6
San Diego State University	0	0	0	3	3	0	16	0	6	28
Santa Clara University	0	0	0	0	0	0	0	0	0	1
Saybrook Institute	0	0	0	0	0	0	21	1	0	22
School of Theology at Claremont	0	0	0	0	0	0	0	0	5	5
Scripps Research Institute	0	0	0	7	7	0	0	0	0	15
Stanford University	20	20	14	58	56	2	13	57	123	565
United States International U	0	0	0	0	0	0	22	0	33	56
University of the Pacific	0	0	0	0	0	0	0	0	17	17
U of California Berkeley	13	36	14	114	108	6	19	92	202	768
U of California Davis	3	13	8	168	147	21	8	27	53	397
U of California Irvine	1	4	16	36	36	0	12	26	35	183
U of California Los Angeles	11	30	16	87	86	1	28	80	242	606
U of California Riverside	1	6	0	26	22	4	7	13	30	96
U of California San Diego	17	8	6	67	67	0	10	16	35	238
U of California San Francisco	0	0	0	48	48	0	1	6	25	90
U of California Santa Barbara	11	10	2	15	15	0	11	34	53	221
U of California Santa Cruz	10	4	1	21	20	1	5	6	15	92
University of La Verne	0	0	0	0	0	0	0	0	52	52
University of San Diego	0	0	0	0	0	0	0	0	14	14
University of San Francisco	0	0	0	0	0	0	0	0	89	89
University of Southern CA	8	5	13	41	41	0	30	61	184	445
Wright Institute, All Campuses	0	0	0	0	0	0	33	0	0	33

See explanatory information, if any, and SOURCE at end of table.

Table 6. Institutions conferring science and engineering (S&E) doctorates, by State, institution, and major field: 1996

[To increase readability, fields span 2 pages and institutions are repeated on facing pages]

State and institution	S&E rank	Total S&E	Engineering						Physical sciences			
			Total	Chemical	Civil	Electrical	Mechanical	Other engineering	Total	Physics & astronomy	Chemistry	Other physical sciences
Colorado, total	17	545	151	15	29	44	14	49	85	37	48	0
Colorado School of Mines	104	53	28	9	0	0	0	19	4	1	3	0
Colorado State University	44	178	43	3	12	12	8	8	27	9	18	0
University of Colorado Boulder	24	267	78	3	17	32	6	20	49	24	25	0
University of Denver	118	38	2	0	0	0	0	2	5	3	2	0
University of Northern Colorado	146	9	0	0	0	0	0	0	0	0	0	0
Connecticut, total	23	391	53	10	7	20	10	6	51	19	31	1
University of Connecticut	52	158	38	6	7	14	6	5	20	6	14	0
University of Hartford	155	0	0	0	0	0	0	0	0	0	0	0
University of New Haven	155	0	0	0	0	0	0	0	0	0	0	0
Wesleyan University	143	12	1	0	0	0	1	0	4	1	3	0
Yale University	31	221	14	4	0	6	3	1	27	12	14	1
Delaware, total	36	136	43	18	7	5	8	5	22	7	15	0
University of Delaware	60	136	43	18	7	5	8	5	22	7	15	0
Wilmington College	155	0	0	0	0	0	0	0	0	0	0	0
District of Columbia, total	26	304	43	0	1	13	6	23	31	11	20	0
American University	106	51	0	0	0	0	0	0	6	3	3	0
Catholic University of America	125	31	6	0	0	1	1	4	9	7	2	0
Gallaudet University	154	1	0	0	0	0	0	0	0	0	0	0
George Washington University	71	107	32	0	1	8	5	18	4	1	3	0
Georgetown University	95	63	0	0	0	0	0	0	7	0	7	0
Howard University	106	51	5	0	0	4	0	1	5	0	5	0
Florida, total	9	762	180	6	24	62	28	60	87	42	44	1
Barry University	153	2	0	0	0	0	0	0	0	0	0	0
Caribbean Ctr Adv Studies Miami	149	6	0	0	0	0	0	0	0	0	0	0
FL Agricultural and Mechanical U	151	4	1	0	0	0	1	0	0	0	0	0
Florida Atlantic University	123	33	16	0	1	5	3	7	2	2	0	0
Florida Institute of Technology	129	26	11	0	0	9	1	1	2	0	2	0
Florida International University	127	29	3	0	0	2	1	0	0	0	0	0
Florida State University	66	116	6	1	0	0	5	0	21	14	6	1
Nova Southeastern University	114	43	0	0	0	0	0	0	0	0	0	0
University of Central Florida	119	37	25	0	4	11	1	9	2	2	0	0
University of Florida	18	307	76	2	14	16	12	32	5	22	29	0
University of Miami	84	76	17	0	1	5	3	8	2	1	1	0
University of Sarasota	155	0	0	0	0	0	0	0	0	0	0	0
University of South Florida	80	83	25	3	4	14	1	3	7	1	6	0
Georgia, total	15	599	171	22	8	51	22	68	70	29	40	1
Clark Atlanta University	141	14	0	0	0	0	0	0	0	0	0	0
Emory University	79	85	0	0	0	0	0	0	16	2	14	0
Georgia Inst of Tech	28	243	167	21	8	51	22	65	19	15	3	1
Georgia State University	109	48	0	0	0	0	0	0	8	6	2	0
Georgia Southern University	155	0	0	0	0	0	0	0	0	0	0	0
Inst of Paper Science & Tech	150	5	2	1	0	0	0	1	2	0	2	0
Medical College of Georgia	143	12	0	0	0	0	0	0	0	0	0	0
University of Georgia	39	192	2	0	0	0	0	2	25	6	19	0
Hawaii, total	37	129	7	0	0	1	4	2	11	7	4	0
University of Hawaii at Manoa	61	129	7	0	0	1	4	2	11	7	4	0
Idaho, total	41	56	17	0	0	4	3	10	13	3	10	0
Idaho State University	146	9	1	0	0	0	0	1	0	0	0	0
University of Idaho	110	47	16	0	0	4	3	9	13	3	10	0
Illinois, total	5	1,476	320	32	39	88	68	93	220	105	115	0
De Paul University	141	14	0	0	0	0	0	0	0	0	0	0
Finch U Hlth Sci/Chgo Med Sch	143	12	0	0	0	0	0	0	0	0	0	0
Illinois Institute Technology	82	78	27	6	6	9	3	3	9	8	1	0
Illinois State University	147	8	0	0	0	0	0	0	0	0	0	0

See explanatory information, if any, and SOURCE at end of table.

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Table 6. Institutions conferring science and engineering (S&E) doctorates, by State, institution, and major field: 1996

[To increase readability, fields span 2 pages and institutions are repeated on facing pages]

State and institution	Earth, atmos., & ocean sciences	Mathematics	Computer sciences	Biological & agricultural sciences			Psychology	Social sciences	Non-S&E, total	Grand total, all fields
				Total	Biological	Agricultural				
Colorado, total	41	19	15	111	91	20	47	76	214	759
Colorado School of Mines	11	2	0	0	0	0	0	8	0	53
Colorado State University	15	4	4	60	40	20	9	16	18	196
University of Colorado Boulder	15	11	11	47	47	0	16	40	101	368
University of Denver	0	0	0	3	3	0	16	12	37	75
University of Northern Colorado	0	2	0	1	1	0	6	0	58	67
Connecticut, total	8	20	11	122	117	5	48	78	238	629
University of Connecticut	2	7	2	45	43	2	29	15	81	239
University of Hartford	0	0	0	0	0	0	0	0	2	2
University of New Haven	0	0	0	0	0	0	0	0	9	9
Wesleyan University	0	2	0	5	5	0	0	0	1	13
Yale University	6	11	9	72	69	3	19	63	145	366
Delaware, total	17	5	4	18	13	5	10	17	36	172
University of Delaware	17	5	4	18	13	5	10	17	21	157
Wilmington College	0	0	0	0	0	0	0	0	15	15
District of Columbia, total	1	3	15	63	63	0	45	103	161	465
American University	0	1	1	1	1	0	9	33	8	59
Catholic University of America	0	0	0	0	0	0	10	6	64	95
Gallaudet University	0	0	0	0	0	0	1	0	5	6
George Washington University	1	2	13	25	25	0	12	18	54	161
Georgetown University	0	0	0	28	28	0	0	28	10	73
Howard University	0	0	1	9	9	0	13	18	20	71
Florida, total	35	20	45	161	121	40	144	90	931	1,693
Barry University	0	0	0	0	0	0	1	1	6	8
Caribbean Ctr Adv Studies Miami	0	0	0	0	0	0	6	0	0	6
FL Agricultural and Mechanical U	0	0	0	3	3	0	0	0	0	4
Florida Atlantic University	0	2	3	2	2	0	5	3	19	52
Florida Institute of Technology	3	3	5	2	2	0	0	0	3	29
Florida International University	0	0	2	6	5	1	12	6	45	74
Florida State University	11	7	4	14	13	1	26	27	164	280
Nova Southeastern University	0	0	16	1	1	0	23	3	377	420
University of Central Florida	0	0	5	0	0	0	5	0	39	76
University of Florida	3	3	9	98	61	37	25	42	111	418
University of Miami	9	1	0	20	19	1	22	5	39	115
University of Sarasota	0	0	0	0	0	0	0	0	71	71
University of South Florida	9	4	1	15	15	0	19	3	57	140
Georgia, total	7	18	27	162	135	27	89	55	311	910
Clark Atlanta University	0	0	0	3	3	0	0	11	8	22
Emory University	0	4	0	30	30	0	17	18	58	143
Georgia Inst of Tech	2	8	26	9	9	0	10	2	9	252
Georgia State University	0	0	1	10	10	0	24	5	80	128
Georgia Southern University	0	0	0	0	0	0	0	0	4	4
Inst of Paper Science & Tech	0	0	0	1	0	1	0	0	0	5
Medical College of Georgia	0	0	0	12	12	0	0	0	1	13
University of Georgia	5	6	0	97	71	26	38	19	151	343
Hawaii, total	16	1	1	38	23	15	4	51	57	186
University of Hawaii at Manoa	16	1	1	38	23	15	4	51	57	186
Idaho, total	2	6	1	16	6	10	0	1	38	94
Idaho State University	0	5	0	3	3	0	0	0	7	16
University of Idaho	2	1	1	13	3	10	0	1	31	78
Illinois, total	20	75	77	310	270	40	162	292	793	2,269
De Paul University	0	0	1	0	0	0	13	0	3	17
Finch U Hlth Sci/Chgo Med Sch	0	0	0	9	9	0	3	0	0	12
Illinois Institute Technology	0	0	25	6	6	0	11	0	4	82
Illinois State University	0	1	0	6	6	0	0	1	54	62

See explanatory information, if any, and SOURCE at end of table.

Table 6. Institutions conferring science and engineering (S&E) doctorates, by State, institution, and major field: 1996

[To increase readability, fields span 2 pages and institutions are repeated on facing pages]

State and institution	S&E rank	Total S&E	Engineering						Physical sciences			
			Total	Chemical	Civil	Electrical	Mechanical	Other engineering	Total	Physics & astronomy	Chemistry	Other physical sciences
Illinois, continued:												
Inst for Clinical Social Work	155	0	0	0	0	0	0	0	0	0	0	0
Loyola University of Chicago	109	48	0	0	0	0	0	0	3	0	3	0
Lutheran Sch Theology at Chicago	155	0	0	0	0	0	0	0	0	0	0	0
Northern Illinois University	127	29	0	0	0	0	0	0	4	1	3	0
Northwestern Univ	25	262	91	9	7	19	18	38	42	17	25	0
Roosevelt University	155	0	0	0	0	0	0	0	0	0	0	0
Rush University	146	9	0	0	0	0	0	0	1	1	0	0
Southern Illinois U Edwardsville	155	0	0	0	0	0	0	0	0	0	0	0
Southern Illinois U Carbondale	87	73	9	0	1	1	1	6	11	6	5	0
University of Chicago	26	261	1	0	0	0	0	1	48	23	25	0
U of Illinois Chicago	51	163	44	4	3	8	22	7	26	7	19	0
U of Illinois Urbana-Champaign	2	519	148	13	22	51	24	38	76	42	34	0
Indiana, total	10	750	191	27	32	50	25	57	122	47	74	1
Ball State University	140	15	0	0	0	0	0	0	0	0	0	0
Indiana State University	146	9	0	0	0	0	0	0	0	0	0	0
Indiana U at Bloomington	37	197	1	0	0	1	0	0	41	18	23	0
Indiana U Purdue U Indianapolis	155	0	0	0	0	0	0	0	0	0	0	0
Purdue University	11	425	158	20	26	40	20	52	64	21	42	1
University of Notre Dame	72	104	32	7	6	9	5	5	17	8	9	0
Iowa, total	20	457	118	6	15	21	30	46	64	19	45	0
Drake University	155	0	0	0	0	0	0	0	0	0	0	0
Iowa State University	29	240	62	1	5	15	17	24	38	12	26	0
Maharishi International U	153	2	0	0	0	0	0	0	0	0	0	0
University of Iowa	34	210	51	5	10	6	13	17	26	7	19	0
University of Northern Iowa	150	5	5	0	0	0	0	5	0	0	0	0
Kansas, total	29	284	49	6	7	8	9	19	37	12	25	0
Kansas State University	64	121	18	5	4	1	3	5	10	4	6	0
University of Kansas	59	142	15	1	3	3	3	5	26	8	18	0
Wichita State University	134	21	16	0	0	4	3	9	1	0	1	0
Kentucky, total	32	197	30	10	2	4	7	7	18	5	13	0
Southern Baptist Theological Sem	155	0	0	0	0	0	0	0	0	0	0	0
Spalding University	155	0	0	0	0	0	0	0	0	0	0	0
University of Kentucky	55	150	21	5	2	3	7	4	17	5	12	0
University of Louisville	110	47	9	5	0	1	0	3	1	0	1	0
Louisiana, total	28	285	34	5	5	12	3	9	28	7	21	0
Grambling State University	155	0	0	0	0	0	0	0	0	0	0	0
LA St U & A&M Col	59	142	17	4	3	2	2	6	19	6	13	0
LA St U Med Ctr Shreveport	146	9	0	0	0	0	0	0	0	0	0	0
LA St U Medical Center	137	18	0	0	0	0	0	0	0	0	0	0
Louisiana Tech University	153	2	2	0	0	1	0	1	0	0	0	0
New Orleans Baptist Theol Sem	152	3	0	0	0	0	0	0	0	0	0	0
Northeast Louisiana University	154	1	0	0	0	0	0	0	1	0	1	0
Tulane University	93	65	8	1	2	2	1	2	4	1	3	0
University of New Orleans	134	21	0	0	0	0	0	0	4	0	4	0
U of Southwestern Louisiana	131	24	7	0	0	7	0	0	0	0	0	0
Maine, total	46	36	8	7	1	0	0	0	4	3	1	0
University of Maine	120	36	8	7	1	0	0	0	4	3	1	0
Maryland, total	12	672	150	18	24	31	28	49	95	67	28	0
Baltimore Hebrew University	153	2	0	0	0	0	0	0	0	0	0	0
Johns Hopkins University	30	225	57	5	16	5	5	26	26	16	10	0
Loyola College	150	5	0	0	0	0	0	0	0	0	0	0
Morgan State University	155	0	0	0	0	0	0	0	0	0	0	0
Peabody Inst of Johns Hopkins U	155	0	0	0	0	0	0	0	0	0	0	0
Uniformed Services U of Hlth Sci	139	16	0	0	0	0	0	0	0	0	0	0
U of Maryland Baltimore	116	40	0	0	0	0	0	0	2	0	2	0
U of Maryland College Park	17	327	83	10	8	25	17	23	58	47	11	0
U of Maryland Baltimore County	103	54	10	3	0	1	6	0	9	4	5	0
U of Maryland Eastern Shore	152	3	0	0	0	0	0	0	0	0	0	0
Massachusetts, total	4	1,575	375	60	24	101	69	121	257	126	130	1
American International College	155	0	0	0	0	0	0	0	0	0	0	0
Boston College	105	52	0	0	0	0	0	0	12	2	10	0
Boston University	46	170	12	0	0	3	1	8	17	10	7	0
Brandeis University	94	64	0	0	0	0	0	0	14	3	11	0

See explanatory information, if any, and SOURCE at end of table.

Table 6. Institutions conferring science and engineering (S&E) doctorates, by State, institution, and major field: 1996

[To increase readability, fields span 2 pages and institutions are repeated on facing pages]

State and institution	Earth, atmos., & ocean sciences	Mathematics	Computer sciences	Biological & agricultural sciences			Psychology	Social sciences	Non-S&E, total	Grand total, all fields
				Total	Biological	Agricultural				
Illinois, continued:										
Inst for Clinical Social Work	0	0	0	0	0	0	0	0	4	4
Loyola University of Chicago	0	0	0	20	20	0	23	2	66	114
Lutheran Sch Theology at Chicago	0	0	0	0	0	0	0	0	4	4
Northern Illinois University	2	4	0	4	4	0	9	6	73	102
Northwestern Univ	1	9	14	44	44	0	20	41	97	359
Roosevelt University	0	0	0	0	0	0	0	0	19	19
Rush University	0	0	0	8	8	0	0	0	8	17
Southern Illinois U Edwardsville	0	0	0	0	0	0	0	0	3	3
Southern Illinois U Carbondale	2	5	0	15	15	0	17	14	83	156
University of Chicago	7	19	3	50	50	0	14	119	121	382
U of Illinois Chicago	2	11	2	37	37	0	13	28	74	237
U of Illinois Urbana-Champaign	6	26	32	111	71	40	39	81	180	699
Indiana, total	10	39	27	166	132	34	82	113	368	1,118
Ball State University	0	0	0	1	1	0	12	2	33	48
Indiana State University	0	0	0	3	2	1	6	0	11	20
Indiana U at Bloomington	2	4	15	50	50	0	26	58	210	407
Indiana U Purdue U Indianapolis	0	0	0	0	0	0	0	0	6	6
Purdue University	8	24	12	97	64	33	31	31	82	507
University of Notre Dame	0	11	0	15	15	0	7	22	26	130
Iowa, total	5	18	6	157	119	38	40	49	241	698
Drake University	0	0	0	0	0	0	0	0	19	19
Iowa State University	2	5	2	88	50	38	21	22	47	287
Maharishi International U	0	0	0	1	1	0	1	0	0	2
University of Iowa	3	13	4	68	68	0	18	27	167	377
University of Northern Iowa	0	0	0	0	0	0	0	0	8	13
Kansas, total	3	13	3	84	50	34	57	38	185	469
Kansas State University	0	9	3	51	17	34	16	14	60	181
University of Kansas	3	1	0	33	33	0	40	24	120	262
Wichita State University	0	3	0	0	0	0	1	0	5	26
Kentucky, total	3	6	6	69	50	19	41	24	144	341
Southern Baptist Theological Sem	0	0	0	0	0	0	0	0	22	22
Spalding University	0	0	0	0	0	0	0	0	14	14
University of Kentucky	3	6	3	58	39	19	21	21	86	236
University of Louisville	0	0	3	11	11	0	20	3	22	69
Louisiana, total	7	22	15	104	81	23	33	42	228	513
Grambling State University	0	0	0	0	0	0	0	0	8	8
LA St U & A&M Col	7	9	3	54	31	23	16	17	96	238
LA St U Med Ctr Shreveport	0	0	0	9	9	0	0	0	0	9
LA St U Medical Center	0	0	0	18	18	0	0	0	11	29
Louisiana Tech University	0	0	0	0	0	0	0	0	10	12
New Orleans Baptist Theol Sem	0	0	0	0	0	0	3	0	37	40
Northeast Louisiana University	0	0	0	0	0	0	0	0	4	5
Tulane University	0	6	3	22	22	0	7	15	26	91
University of New Orleans	0	0	0	0	0	0	7	10	28	49
U of Southwestern Louisiana	0	7	9	1	1	0	0	0	8	32
Maine, total	0	1	2	14	8	6	7	0	12	48
University of Maine	0	1	2	14	8	6	7	0	12	48
Maryland, total	14	30	23	194	183	11	49	117	282	954
Baltimore Hebrew University	0	0	0	0	0	0	0	2	0	2
Johns Hopkins University	0	5	4	85	85	0	3	45	94	319
Loyola College	0	0	0	0	0	0	5	0	0	5
Morgan State University	0	0	0	0	0	0	0	0	3	3
Peabody Inst of Johns Hopkins U	0	0	0	0	0	0	0	0	13	13
Uniformed Services U of Hlth Sci	0	0	0	14	14	0	2	0	0	16
U of Maryland Baltimore	0	0	0	37	37	0	0	1	32	72
U of Maryland College Park	13	20	14	42	31	11	35	62	136	463
U of Maryland Baltimore County	0	5	5	14	14	0	4	7	4	58
U of Maryland Eastern Shore	1	0	0	2	2	0	0	0	0	3
Massachusetts, total	39	74	60	373	363	10	112	285	685	2,260
American International College	0	0	0	0	0	0	0	0	9	9
Boston College	0	0	0	5	5	0	16	19	58	110
Boston University	1	11	9	55	55	0	29	36	130	300
Brandeis University	0	9	0	16	16	0	3	22	18	82

See explanatory information, if any, and SOURCE at end of table.

Table 6. Institutions conferring science and engineering (S&E) doctorates, by State, institution, and major field: 1996

[To increase readability, fields span 2 pages and institutions are repeated on facing pages]

State and institution	S&E rank	Total S&E	Engineering						Physical sciences			
			Total	Chemical	Civil	Electrical	Mechanical	Other engineering	Total	Physics & astronomy	Chemistry	Other physical sciences
Massachusetts, continued												
Clark University	126	30	1	1	0	0	0	0	4	1	3	0
Harvard University	20	282	10	0	0	0	1	9	50	26	23	1
MA Col Phar Allied Hlth	154	1	0	0	0	0	0	0	1	0	1	0
Massachusetts Institute of Tech	2	519	234	29	15	52	45	93	73	41	32	0
New England Conserv of Music	155	0	0	0	0	0	0	0	0	0	0	0
Northeastern University	85	75	24	3	2	13	2	4	18	9	9	0
Simmons College	155	0	0	0	0	0	0	0	0	0	0	0
Smith College	155	0	0	0	0	0	0	0	0	0	0	0
Springfield College	155	0	0	0	0	0	0	0	0	0	0	0
Tufts University	78	90	10	1	0	5	2	2	10	4	6	0
U of Massachusetts Amherst	38	196	56	13	3	22	16	2	31	20	11	0
U of Massachusetts Boston	136	19	0	0	0	0	0	0	0	0	0	0
U of Massachusetts Worcester	146	9	0	0	0	0	0	0	0	0	0	0
U of Massachusetts Lowell	102	55	18	11	0	4	2	1	27	10	17	0
Worcester Polytechnic Institute	142	13	10	2	4	2	0	2	0	0	0	0
Michigan, total	8	1,073	295	29	34	76	64	92	136	55	80	1
Andrews University	148	9	0	0	0	0	0	0	0	0	0	0
Central Michigan University	153	2	0	0	0	0	0	0	0	0	0	0
Eastern Michigan University	155	0	0	0	0	0	0	0	0	0	0	0
Michigan State University	16	334	40	6	9	11	6	8	52	20	32	0
Michigan Technological U	118	38	21	1	6	1	8	5	8	5	3	0
Oakland University	146	9	6	0	0	0	1	5	2	2	0	0
University of Detroit Mercy	135	20	1	0	0	0	0	1	0	0	0	0
University of Michigan Ann Arbor	4	481	189	19	15	54	36	65	55	24	30	1
Wayne State University	53	157	38	3	4	10	13	8	17	2	15	0
Western Michigan University	132	23	0	0	0	0	0	0	2	2	0	0
Minnesota, total	18	505	118	26	14	23	25	30	55	22	33	0
Luther Seminary	155	0	0	0	0	0	0	0	0	0	0	0
Mayo Graduate School	129	26	0	0	0	0	0	0	0	0	0	0
U of Minnesota Twin Cities	5	467	118	26	14	23	25	30	55	22	33	0
University of St Thomas	155	0	0	0	0	0	0	0	0	0	0	0
Walden University	143	12	0	0	0	0	0	0	0	0	0	0
Mississippi, total	35	151	18	1	0	6	6	5	28	8	20	0
Delta State University	155	0	0	0	0	0	0	0	0	0	0	0
Jackson State University	153	2	0	0	0	0	0	0	0	0	0	0
Mississippi State University	98	59	12	1	0	6	3	2	8	0	8	0
Reformed Theological Sem	154	1	0	0	0	0	0	0	0	0	0	0
U of Mississippi Med Ctr	140	15	0	0	0	0	0	0	0	0	0	0
U of Mississippi	127	29	6	0	0	0	3	3	9	6	3	0
U of Southern Mississippi	112	45	0	0	0	0	0	0	11	2	9	0
Missouri, total	22	446	111	15	7	23	11	55	57	20	37	0
Concordia Seminary	155	0	0	0	0	0	0	0	0	0	0	0
Midwestern Baptist Theol Sem	155	0	0	0	0	0	0	0	0	0	0	0
St Louis University	111	46	0	0	0	0	0	0	0	0	0	0
University Missouri Columbia	57	147	30	3	1	14	4	8	14	4	10	0
University Missouri Kansas City	130	25	0	0	0	0	0	0	2	0	2	0
University Missouri Rolla	94	64	45	5	3	2	2	33	14	4	10	0
University Missouri St Louis	141	14	0	0	0	0	0	0	4	0	4	0
Washington University	55	150	36	7	3	7	5	14	23	12	11	0
Montana, total	44	48	4	2	1	0	0	1	12	6	6	0
Montana St University Bozeman	121	35	4	2	1	0	0	1	11	6	5	0
University of Montana	142	13	0	0	0	0	0	0	1	0	1	0
Nebraska, total	34	170	11	1	1	1	0	8	20	8	12	0
Creighton University	152	3	0	0	0	0	0	0	0	0	0	0
U of Nebraska at Lincoln	54	152	11	1	1	1	0	8	20	8	12	0
U of Nebraska Medical Center	140	15	0	0	0	0	0	0	0	0	0	0
University of Nebraska at Omaha	155	0	0	0	0	0	0	0	0	0	0	0
Nevada, total	44	48	8	0	3	1	1	3	8	2	6	0
University of Nevada-Las Vegas	151	4	2	0	2	0	0	0	1	1	0	0
University of Nevada-Reno	113	44	6	0	1	1	1	3	7	1	6	0

See explanatory information, if any, and SOURCE at end of table.

Table 6. Institutions conferring science and engineering (S&E) doctorates, by State, institution, and major field: 1996

[To increase readability, fields span 2 pages and institutions are repeated on facing pages]

State and institution	Earth, atmos., & ocean sciences	Mathematics	Computer sciences	Biological & agricultural sciences			Psychology	Social sciences	Non-S&E, total	Grand total, all fields
				Total	Biological	Agricultural				
Massachusetts, continued:										
Clark University	1	0	0	2	2	0	5	17	4	34
Harvard University	3	12	8	119	118	1	9	71	245	527
MA Col Phar Allied Hlth	0	0	0	0	0	0	0	0	0	1
Massachusetts Institute of Tech	28	25	24	71	71	0	4	60	34	553
New England Conserv of Music	0	0	0	0	0	0	0	0	2	2
Northeastern University	0	5	2	6	6	0	7	13	3	78
Simmons College	0	0	0	0	0	0	0	0	5	5
Smith College	0	0	0	0	0	0	0	0	8	8
Springfield College	0	0	0	0	0	0	0	0	3	3
Tufts University	0	3	0	46	46	0	3	18	5	95
U of Massachusetts Amherst	2	9	11	35	26	9	27	25	142	338
U of Massachusetts Boston	3	0	0	3	3	0	9	4	0	19
U of Massachusetts Worcester	0	0	0	9	9	0	0	0	0	9
U of Massachusetts Lowell	1	0	5	4	4	0	0	0	19	74
Worcester Polytechnic Institute	0	0	1	2	2	0	0	0	0	13
Michigan, total	20	38	24	251	199	52	152	157	486	1,559
Andrews University	0	0	0	0	0	0	9	0	27	36
Central Michigan University	0	0	0	0	0	0	2	0	0	2
Eastern Michigan University	0	0	0	0	0	0	0	0	4	4
Michigan State University	1	17	12	111	65	46	46	55	145	479
Michigan Technological U	1	0	0	7	2	5	0	1	4	42
Oakland University	0	1	0	0	0	0	0	0	2	11
University of Detroit Mercy	0	0	0	0	0	0	19	0	0	20
University of Michigan Ann Arbor	17	15	7	77	77	0	42	79	204	685
Wayne State University	0	3	5	56	55	1	24	14	68	225
Western Michigan University	1	2	0	0	0	0	10	8	32	55
Minnesota, total	4	21	20	158	127	31	60	69	425	930
Luther Seminary	0	0	0	0	0	0	0	0	5	5
Mayo Graduate School	0	0	0	26	26	0	0	0	0	26
U of Minnesota Twin Cities	4	21	20	132	101	31	48	69	257	724
University of St Thomas	0	0	0	0	0	0	0	0	25	25
Walden University	0	0	0	0	0	0	12	0	138	150
Mississippi, total	2	3	1	51	32	19	33	15	208	359
Delta State University	0	0	0	0	0	0	0	0	4	4
Jackson State University	1	0	0	0	0	0	0	1	12	14
Mississippi State University	0	2	0	27	8	19	1	9	50	109
Reformed Theological Sem	0	0	0	0	0	0	0	1	3	4
U of Mississippi Med Ctr	0	0	0	15	15	0	0	0	1	16
U of Mississippi	0	1	0	5	5	0	4	4	56	85
U of Southern Mississippi	1	0	1	4	4	0	28	0	82	127
Missouri, total	15	19	11	104	80	24	64	65	251	697
Concordia Seminary	0	0	0	0	0	0	0	0	2	2
Midwestern Baptist Theol Sem	0	0	0	0	0	0	0	0	25	25
St Louis University	3	1	0	11	11	0	21	10	74	120
University Missouri Columbia	1	8	0	46	22	24	26	22	96	243
University Missouri Kansas City	2	0	7	3	3	0	10	1	15	40
University Missouri Rolla	3	0	1	1	1	0	0	0	0	64
University Missouri St Louis	0	0	0	2	2	0	5	3	11	25
Washington University	6	10	3	41	41	0	2	29	28	178
Montana, total	1	6	0	21	16	5	4	0	13	61
Montana St University Bozeman	0	5	0	15	12	3	0	0	9	44
University of Montana	1	1	0	6	4	2	4	0	4	17
Nebraska, total	1	7	5	73	39	34	31	22	115	285
Creighton University	0	0	0	3	3	0	0	0	0	3
U of Nebraska at Lincoln	1	7	5	55	21	34	31	22	109	261
U of Nebraska Medical Center	0	0	0	15	15	0	0	0	5	20
University of Nebraska at Omaha	0	0	0	0	0	0	0	0	1	1
Nevada, total	9	0	0	12	12	0	6	5	26	74
University of Nevada-Las Vegas	0	0	0	1	1	0	0	0	14	18
University of Nevada-Reno	9	0	0	11	11	0	6	5	12	56

See explanatory information, if any, and SOURCE at end of table.

Table 6. Institutions conferring science and engineering (S&E) doctorates, by State, institution, and major field: 1996

[To increase readability, fields span 2 pages and institutions are repeated on facing pages]

State and institution	S&E rank	Total S&E	Engineering						Physical sciences			
			Total	Chemical	Civil	Electrical	Mechanical	Other engineering	Total	Physics & astronomy	Chemistry	Other physical sciences
New Hampshire, total	38	83	14	1	2	3	2	6	23	8	15	0
Dartmouth College	111	46	10	0	2	2	1	5	11	4	7	0
University of New Hampshire	119	37	4	1	0	1	1	1	12	4	8	0
New Jersey, total	13	659	178	36	19	43	25	55	105	62	43	0
Drew University	153	2	0	0	0	0	0	0	0	0	0	0
Fairleigh Dickinson U Rutherford	141	14	0	0	0	0	0	0	0	0	0	0
New Jersey Institute Technology	116	40	30	6	4	9	8	3	0	0	0	0
Princeton Theological Seminary	155	0	0	0	0	0	0	0	0	0	0	0
Princeton University	34	210	52	12	10	14	6	10	57	40	17	0
Rutgers St U NJ New Brunswick	21	272	73	13	3	12	10	35	39	17	22	0
Rutgers St U NJ Newark Campus	130	25	0	0	0	0	0	0	3	0	3	0
Seton Hall University	132	23	0	0	0	0	0	0	1	0	1	0
Stevens Institute of Technology	118	38	23	5	2	8	1	7	5	5	0	0
U of Medicine & Dentistry of NJ	121	35	0	0	0	0	0	0	0	0	0	0
New Mexico, total	32	197	53	7	5	18	6	17	37	20	17	0
New Mexico Inst Mining & Tech	142	13	5	3	0	0	0	2	3	1	2	0
New Mexico State University	99	58	23	2	1	12	3	5	10	7	3	0
University of New Mexico	63	126	25	2	4	6	3	10	24	12	12	0
New York, total	2	2,543	438	57	47	156	70	108	372	177	195	0
Adelphi University	125	31	0	0	0	0	0	0	0	0	0	0
Albany Medical College	143	12	0	0	0	0	0	0	0	0	0	0
Alfred University	146	9	9	0	0	0	0	9	0	0	0	0
Clarkson University	133	22	14	7	0	1	5	1	5	2	3	0
Columbia U in City of New York	22	270	45	6	3	17	6	13	44	20	24	0
Cornell U Medical Campus	114	43	0	0	0	0	0	0	0	0	0	0
Cornell U Endowed Colleges	10	433	91	13	15	20	10	33	70	34	36	0
CUNY Grad School & U Center	35	209	15	3	2	5	3	2	31	17	14	0
Fordham University	114	43	0	0	0	0	0	0	0	0	0	0
Hofstra University	122	34	0	0	0	0	0	0	0	0	0	0
Jewish Theological Sem America	155	0	0	0	0	0	0	0	0	0	0	0
Juilliard School	155	0	0	0	0	0	0	0	0	0	0	0
Long Island University Brooklyn	137	18	0	0	0	0	0	0	0	0	0	0
Manhattan School of Music	155	0	0	0	0	0	0	0	0	0	0	0
New School for Social Research	114	43	0	0	0	0	0	0	0	0	0	0
New York Medical College	140	15	0	0	0	0	0	0	0	0	0	0
New York University	58	145	0	0	0	0	0	0	17	11	6	0
Pace University New York Campus	155	0	0	0	0	0	0	0	0	0	0	0
Polytechnic University	98	59	41	2	5	25	4	5	11	1	10	0
Rensselaer Polytechnic Institute	60	136	85	8	7	26	24	20	27	9	18	0
Rockefeller University	130	25	0	0	0	0	0	0	2	1	1	0
St John's U (Jamaica, NY)	127	29	0	0	0	0	0	0	0	0	0	0
Syracuse University	73	103	21	1	0	16	3	1	12	5	7	0
SUNY at Albany	71	107	0	0	0	0	0	0	16	11	5	0
SUNY at Binghamton	97	61	16	0	0	11	1	4	9	0	9	0
SUNY at Buffalo	33	213	57	9	15	14	9	10	31	5	26	0
SUNY at Stony Brook	36	203	18	0	0	6	2	10	40	26	14	0
SUNY Col Environ Sci & Forestry	141	14	0	0	0	0	0	0	3	0	3	0
SUNY Col of Optometry	155	0	0	0	0	0	0	0	0	0	0	0
SUNY Health Sci Ctr Brooklyn	139	16	0	0	0	0	0	0	0	0	0	0
SUNY Health Sci Ctr Syracuse	148	7	0	0	0	0	0	0	0	0	0	0
Teachers College Columbia U	155	0	0	0	0	0	0	0	0	0	0	0
Union College	155	0	0	0	0	0	0	0	0	0	0	0
Union Theological Seminary	155	0	0	0	0	0	0	0	0	0	0	0
University of Rochester	39	192	26	8	0	15	3	0	54	35	19	0
Yeshiva University	106	51	0	0	0	0	0	0	0	0	0	0

See explanatory information, if any, and SOURCE at end of table.

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Table 6. Institutions conferring science and engineering (S&E) doctorates, by State, institution, and major field: 1996

[To increase readability, fields span 2 pages and institutions are repeated on facing pages]

State and institution	Earth, atmos., & ocean sciences	Mathematics	Computer sciences	Biological & agricultural sciences			Psychology	Social sciences	Non-S&E. total	Grand total, all fields
				Total	Biological	Agricultural				
New Hampshire, total	6	0	4	28	26	2	6	2	14	97
Dartmouth College	3	0	3	19	19	0	0	0	0	46
University of New Hampshire	3	0	1	9	7	2	6	2	14	51
New Jersey, total	19	36	29	150	137	13	55	87	270	929
Drew University	0	0	0	0	0	0	2	0	18	20
Fairleigh Dickinson U Rutherford	0	0	0	0	0	0	14	0	0	14
New Jersey Institute Technology	2	0	8	0	0	0	0	0	0	40
Princeton Theological Seminary	0	0	0	0	0	0	0	0	16	16
Princeton University	5	14	6	29	29	0	4	43	77	287
Rutgers St U NJ New Brunswick	12	21	7	73	61	12	12	35	123	395
Rutgers St U NJ Newark Campus	0	0	0	12	11	1	1	9	15	40
Seton Hall University	0	0	0	1	1	0	21	0	20	43
Stevens Institute of Technology	0	1	8	0	0	0	1	0	1	39
U of Medicine & Dentistry of NJ	0	0	0	35	35	0	0	0	0	35
New Mexico, total	13	3	5	39	30	9	22	25	113	310
New Mexico Inst Mining & Tech	5	0	0	0	0	0	0	0	0	13
New Mexico State University	0	1	3	15	6	9	5	1	22	80
University of New Mexico	8	2	2	24	24	0	17	24	91	217
New York, total	53	114	93	632	566	66	404	437	1,323	3,866
Adelphi University	0	1	0	0	0	0	30	0	18	49
Albany Medical College	0	0	0	12	12	0	0	0	0	12
Alfred University	0	0	0	0	0	0	0	0	0	9
Clarkson University	0	1	0	2	2	0	0	0	0	22
Columbia U in City of New York	16	9	13	59	59	0	32	52	159	429
Cornell U Medical Campus	0	0	0	43	43	0	0	0	0	43
Cornell U Endowed Colleges	4	17	10	152	90	62	12	77	63	516
CUNY Grad School & U Center	3	14	11	33	33	0	50	52	93	302
Fordham University	0	0	0	4	4	0	32	7	67	110
Hofstra University	0	0	0	0	0	0	34	0	18	52
Jewish Theological Sem America	0	0	0	0	0	0	0	0	6	6
Juilliard School	0	0	0	0	0	0	0	0	5	5
Long Island University Brooklyn	0	0	0	0	0	0	18	0	0	18
Manhattan School of Music	0	0	0	0	0	0	0	0	15	15
New School for Social Research	0	0	0	0	0	0	20	23	2	45
New York Medical College	0	0	0	15	15	0	0	0	0	15
New York University	1	17	6	40	40	0	34	30	205	350
Pace University New York Campus	0	0	0	0	0	0	0	0	4	4
Polytechnic University	0	1	6	0	0	0	0	0	0	59
Rensselaer Polytechnic Institute	4	10	7	1	1	0	0	2	9	145
Rockefeller University	0	0	0	23	23	0	0	0	0	25
St John's U (Jamaica, NY)	0	0	0	4	4	0	25	0	12	41
Syracuse University	0	3	12	9	9	0	13	33	69	172
SUNY at Albany	6	6	4	13	13	0	25	37	65	172
SUNY at Binghamton	2	2	4	5	5	0	5	18	19	80
SUNY at Buffalo	1	5	9	49	49	0	24	37	136	349
SUNY at Stony Brook	12	22	6	49	49	0	26	30	60	263
SUNY Col Environ Sci & Forestry	1	0	0	9	5	4	0	1	1	15
SUNY Col of Optometry	0	0	0	0	0	0	0	0	1	1
SUNY Health Sci Ctr Brooklyn	0	0	0	16	16	0	0	0	0	16
SUNY Health Sci Ctr Syracuse	0	0	0	7	7	0	0	0	0	7
Teachers College Columbia U	0	0	0	0	0	0	0	0	193	193
Union College	0	0	0	0	0	0	0	0	1	1
Union Theological Seminary	0	0	0	0	0	0	0	0	8	8
University of Rochester	3	6	5	51	51	0	9	38	67	259
Yeshiva University	0	0	0	36	36	0	15	0	7	58

See explanatory information, if any, and SOURCE at end of table.

Table 6. Institutions conferring science and engineering (S&E) doctorates, by State, institution, and major field: 1996

[To increase readability, fields span 2 pages and institutions are repeated on facing pages]

State and institution	S&E rank	Total S&E	Engineering						Physical sciences			
			Total	Chemical	Civil	Electrical	Mechanical	Other engineering	Total	Physics & astronomy	Chemistry	Other physical sciences
North Carolina, total	11	708	137	14	20	39	12	52	88	31	57	0
Duke University	48	167	23	0	4	7	1	11	27	10	17	0
East Carolina University	144	11	0	0	0	0	0	0	0	0	0	0
North Carolina State U Raleigh	23	269	109	14	14	32	11	38	20	12	8	0
U of North Carolina Chapel Hill	32	217	5	0	2	0	0	3	35	9	26	0
U of North Carolina Greensboro	134	21	0	0	0	0	0	0	0	0	0	0
Wake Forest University	132	23	0	0	0	0	0	0	6	0	6	0
North Dakota, total	42	54	1	0	0	0	1	0	11	1	10	0
North Dakota State University	123	33	1	0	0	0	1	0	7	1	6	0
University of North Dakota	134	21	0	0	0	0	0	0	4	0	4	0
Ohio, total	7	1,094	304	41	14	69	57	123	190	68	120	2
Air Force Institute Technology	125	31	28	0	0	9	1	18	3	3	0	0
Bowling Green State University	111	46	0	0	0	0	0	0	2	0	2	0
Case Western Reserve University	62	128	52	11	1	10	7	23	20	8	12	0
Cleveland State University	131	24	7	0	1	3	0	3	7	0	7	0
Hebrew Union Col-Jewish Inst Rel	155	0	0	0	0	0	0	0	0	0	0	0
Kent State University	100	57	0	0	0	0	0	0	17	12	5	0
Medical College of Ohio	133	22	0	0	0	0	0	0	0	0	0	0
Miami University Oxford Campus	130	25	0	0	0	0	0	0	4	0	4	0
Ohio State University	9	435	111	7	4	24	27	49	58	29	27	2
Ohio University	117	39	7	0	0	6	1	0	10	4	6	0
University of Akron	75	98	27	18	2	0	3	4	36	8	28	0
University of Cincinnati	60	136	53	4	6	11	12	20	22	4	18	0
University of Dayton	143	12	12	0	0	4	3	5	0	0	0	0
University of Toledo	123	33	7	1	0	2	3	1	11	0	11	0
Wright State University	147	8	0	0	0	0	0	0	0	0	0	0
Youngstown State University	155	0	0	0	0	0	0	0	0	0	0	0
Oklahoma, total	30	247	66	22	7	9	13	15	20	6	14	0
Oklahoma State University	71	107	20	1	3	1	5	10	7	3	4	0
University of Oklahoma Norman	70	110	31	8	4	8	7	4	13	3	10	0
University of Tulsa	126	30	15	13	0	0	1	1	0	0	0	0
Oregon, total	27	300	45	1	7	18	3	16	38	21	17	0
Oregon Grad Inst Science & Tech	122	34	19	0	1	7	0	11	1	1	0	0
Oregon Health Sciences U	140	15	0	0	0	0	0	0	0	0	0	0
Oregon State University	49	165	24	1	6	10	3	4	21	11	10	0
Portland State University	135	20	2	0	0	1	0	1	0	0	0	0
University of Oregon	92	66	0	0	0	0	0	0	16	9	7	0
Pennsylvania, total	6	1,312	386	64	29	88	62	143	174	68	106	0
Bryn Mawr College	148	7	0	0	0	0	0	0	0	0	0	0
Carnegie Mellon University	45	171	91	19	11	35	5	21	16	8	8	0
Drexel University	119	37	23	1	6	5	4	7	6	1	5	0
Duquesne University	146	9	0	0	0	0	0	0	3	0	3	0
Indiana University Pennsylvania	148	7	0	0	0	0	0	0	0	0	0	0
Lehigh University	86	74	46	14	3	7	8	14	7	4	3	0
Medical Col PA, the	145	10	0	0	0	0	0	0	0	0	0	0
Hahnemann University	133	22	0	0	0	0	0	0	0	0	0	0
Pennsylvania State U	14	342	144	13	6	16	33	76	35	11	24	0
Philadelphia Col Pharmacy & Sci	148	7	0	0	0	0	0	0	3	0	3	0
Temple University	69	112	1	0	0	1	0	0	15	8	7	0
Thomas Jefferson University	128	28	0	0	0	0	0	0	0	0	0	0
University of Pennsylvania	19	303	45	6	1	12	7	19	52	18	34	0
University of Pittsburgh	42	182	36	11	2	12	5	6	36	18	18	0
Villanova University	154	1	0	0	0	0	0	0	1	0	1	0
Westminster Theological Seminary	155	0	0	0	0	0	0	0	0	0	0	0
Widener U Pennsylvania Campus	155	0	0	0	0	0	0	0	0	0	0	0

See explanatory information, if any, and SOURCE at end of table.

Table 6. Institutions conferring science and engineering (S&E) doctorates, by State, institution, and major field: 1996

[To increase readability, fields span 2 pages and institutions are repeated on facing pages]

State and institution	Earth, atmos., & ocean sciences	Mathematics	Computer sciences	Biological & agricultural sciences			Psychology	Social sciences	Non-S&E, total	Grand total, all fields
				Total	Biological	Agricultural				
North Carolina, total	26	40	14	263	218	45	58	82	336	1,044
Duke University	8	10	4	60	59	1	10	25	64	231
East Carolina University	0	0	0	11	11	0	0	0	9	20
North Carolina State U Raleigh	8	14	6	89	45	44	10	13	59	328
U of North Carolina Chapel Hill	10	16	4	83	83	0	20	44	147	364
U of North Carolina Greensboro	0	0	0	3	3	0	18	0	57	78
Wake Forest University	0	0	0	17	17	0	0	0	0	23
North Dakota, total	3	0	3	22	8	14	14	0	25	79
North Dakota State University	1	0	3	21	7	14	0	0	0	33
University of North Dakota	2	0	0	1	1	0	14	0	25	46
Ohio, total	19	43	14	241	222	19	150	133	741	1,835
Air Force Institute Technology	0	0	0	0	0	0	0	0	0	31
Bowling Green State University	0	6	0	2	2	0	20	16	44	90
Case Western Reserve University	0	2	1	39	39	0	7	7	46	174
Cleveland State University	0	0	1	5	5	0	0	4	15	39
Hebrew Union Col-Jewish Inst Rel	0	0	0	0	0	0	0	0	1	1
Kent State University	3	0	2	8	8	0	18	9	82	139
Medical College of Ohio	0	0	0	22	22	0	0	0	2	24
Miami University Oxford Campus	3	0	0	3	3	0	10	5	19	44
Ohio State University	11	30	9	101	83	18	42	73	273	708
Ohio University	0	4	0	10	10	0	7	1	93	132
University of Akron	0	0	0	4	4	0	23	8	33	131
University of Cincinnati	2	0	0	34	33	1	15	10	89	225
University of Dayton	0	0	0	0	0	0	0	0	6	18
University of Toledo	0	1	0	6	6	0	8	0	36	69
Wright State University	0	0	1	7	7	0	0	0	0	8
Youngstown State University	0	0	0	0	0	0	0	0	2	2
Oklahoma, total	12	7	8	65	45	20	35	34	174	421
Oklahoma State University	3	4	3	33	13	20	18	19	100	207
University of Oklahoma Norman	7	3	2	28	28	0	11	15	72	182
University of Tulsa	2	0	3	4	4	0	6	0	2	32
Oregon, total	21	11	14	110	64	46	23	38	140	440
Oregon Grad Inst Science & Tech	4	0	6	4	4	0	0	0	0	34
Oregon Health Sciences U	0	0	0	14	14	0	1	0	5	20
Oregon State University	13	5	4	80	34	46	10	8	40	205
Portland State University	2	0	1	0	0	0	0	15	15	35
University of Oregon	2	6	3	12	12	0	12	15	80	146
Pennsylvania, total	18	41	60	267	253	14	146	220	849	2,161
Bryn Mawr College	0	0	0	2	2	0	4	1	14	21
Carnegie Mellon University	0	7	23	11	11	0	6	17	21	192
Drexel University	0	1	0	6	6	0	0	1	14	51
Duquesne University	1	0	0	1	1	0	4	0	25	34
Indiana University Pennsylvania	0	0	0	0	0	0	0	7	37	44
Lehigh University	2	3	2	6	6	0	7	1	18	92
Medical Col PA, the	0	0	0	10	10	0	0	0	0	10
Hahnemann University	0	0	0	10	10	0	12	0	1	23
Pennsylvania State U	12	15	6	72	58	14	33	25	185	527
Philadelphia Col Pharmacy & Sci	0	0	0	4	4	0	0	0	3	10
Temple University	0	6	0	22	22	0	47	21	171	283
Thomas Jefferson University	0	0	0	28	28	0	0	0	0	28
University of Pennsylvania	1	2	23	64	64	0	9	107	149	452
University of Pittsburgh	2	7	6	31	31	0	24	40	174	356
Villanova University	0	0	0	0	0	0	0	0	0	1
Westminster Theological Seminary	0	0	0	0	0	0	0	0	11	11
Widener U Pennsylvania Campus	0	0	0	0	0	0	0	0	26	26

See explanatory information, if any, and SOURCE at end of table.

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Table 6. Institutions conferring science and engineering (S&E) doctorates, by State, institution, and major field: 1996

[To increase readability, fields span 2 pages and institutions are repeated on facing pages]

State and institution	S&E rank	Total S&E	Engineering						Physical sciences			
			Total	Chemical	Civil	Electrical	Mechanical	Other engineering	Total	Physics & astronomy	Chemistry	Other physical sciences
Rhode Island, total	33	191	34	2	2	12	7	11	25	15	10	0
Brown University	64	121	20	1	0	5	5	9	20	12	8	0
Providence College	155	0	0	0	0	0	0	0	0	0	0	0
Salve Regina University	154	1	0	0	0	0	0	0	0	0	0	0
University of Rhode Island	90	69	14	1	2	7	2	2	5	3	2	0
South Carolina, total	31	242	51	5	7	16	10	13	26	3	23	0
Clemson University	72	104	42	3	7	10	9	13	11	1	10	0
Medical U South Carolina	131	24	0	0	0	0	0	0	2	0	2	0
South Carolina State University	155	0	0	0	0	0	0	0	0	0	0	0
U of South Carolina at Columbia	68	114	9	2	0	6	1	0	13	2	11	0
South Dakota, total	49	24	1	0	0	0	0	1	2	0	2	0
South Dakota Sch of Mines & Tech	154	1	1	0	0	0	0	1	0	0	0	0
South Dakota State University	139	16	0	0	0	0	0	0	2	0	2	0
University of South Dakota	148	7	0	0	0	0	0	0	0	0	0	0
Tennessee, total	24	350	83	9	15	17	12	30	41	12	29	0
East Tennessee State University	155	0	0	0	0	0	0	0	0	0	0	0
Geo Peabody Col Teachers	155	0	0	0	0	0	0	0	0	0	0	0
Meharry Medical College	148	7	0	0	0	0	0	0	0	0	0	0
Mid-America Baptist Theol Sem	155	0	0	0	0	0	0	0	0	0	0	0
Middle Tennessee State U	149	6	0	0	0	0	0	0	1	0	1	0
Tennessee State University	154	1	0	0	0	0	0	0	0	0	0	0
Tennessee Technological U	146	9	9	1	1	3	4	0	0	0	0	0
University of Memphis	112	45	4	0	0	0	2	2	8	0	8	0
University Tennessee Knoxville	51	163	44	7	9	9	3	16	24	8	16	0
University Tennessee Memphis	133	22	0	0	0	0	0	0	0	0	0	0
Vanderbilt University	76	97	26	1	5	5	3	12	8	4	4	0
Texas, total	3	1,710	494	85	66	151	70	122	220	93	127	0
Baylor College of Medicine	125	31	0	0	0	0	0	0	0	0	0	0
Baylor University	147	8	0	0	0	0	0	0	2	1	1	0
Dallas Theological Seminary	155	0	0	0	0	0	0	0	0	0	0	0
Lamar University-Beaumont	152	3	3	1	1	0	1	0	0	0	0	0
Rice University	73	103	34	6	7	8	8	5	19	8	11	0
Sam Houston State University	149	6	0	0	0	0	0	0	0	0	0	0
Southern Methodist University	103	54	26	0	1	19	2	4	0	0	0	0
Southwestern Baptist Theol Sem	154	1	0	0	0	0	0	0	0	0	0	0
St Mary's University	152	3	0	0	0	0	0	0	0	0	0	0
Stephen F Austin State U	153	2	0	0	0	0	0	0	0	0	0	0
Texas A&M University	6	457	142	25	22	34	22	39	57	10	47	0
Texas A&M University-Commerce	154	1	0	0	0	0	0	0	0	0	0	0
Texas A&M University Kingsville	155	0	0	0	0	0	0	0	0	0	0	0
Texas Christian University	143	12	0	0	0	0	0	0	5	2	3	0
Texas Southern University	155	0	0	0	0	0	0	0	0	0	0	0
Texas Tech University	77	94	26	6	4	5	3	8	14	4	10	0
Texas Woman's University	127	29	0	0	0	0	0	0	0	0	0	0
University of Dallas	150	5	0	0	0	0	0	0	0	0	0	0
University of Houston	74	101	32	11	4	6	5	6	16	3	13	0
U North TX	89	71	0	0	0	0	0	0	7	2	5	0
U North TX Hlth Sci Ctr Ft Worth	149	6	0	0	0	0	0	0	0	0	0	0
U Texas at Arlington	93	65	37	0	2	15	3	17	11	6	5	0
U Texas at Austin	7	448	181	36	25	56	26	38	74	46	28	0
U Texas at Dallas	110	47	8	0	0	8	0	0	11	7	4	0
U Texas at El Paso	153	2	0	0	0	0	0	0	0	0	0	0
U Texas Hlth Sci Ctr Houston	91	67	0	0	0	0	0	0	0	0	0	0
U Texas Hlth Sci Ctr San Antonio	138	17	0	0	0	0	0	0	3	3	0	0
U Texas Med Branch Galveston	130	25	0	0	0	0	0	0	0	0	0	0
U Texas SW Med Ctr Dallas	105	52	5	0	0	0	0	5	1	1	0	0

See explanatory information, if any, and SOURCE at end of table.

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Table 6. Institutions conferring science and engineering (S&E) doctorates, by State, institution, and major field: 1996

[To increase readability, fields span 2 pages and institutions are repeated on facing pages]

State and institution	Earth, atmos., & ocean sciences	Mathematics	Computer sciences	Biological & agricultural sciences			Psychology	Social sciences	Non-S&E, total	Grand total, all fields
				Total	Biological	Agricultural				
Rhode Island, total	16	16	6	34	32	2	19	41	51	242
Brown University	4	12	6	19	19	0	2	38	35	156
Providence College	0	0	0	0	0	0	0	0	1	1
Salve Regina University	0	0	0	0	0	0	0	1	2	3
University of Rhode Island	12	4	0	15	13	2	17	2	13	82
South Carolina, total	11	8	6	73	65	8	20	47	181	423
Clemson University	1	3	4	27	19	8	0	16	13	117
Medical U South Carolina	0	0	0	22	22	0	0	0	0	24
South Carolina State University	0	0	0	0	0	0	0	0	15	15
U of South Carolina at Columbia	10	5	2	24	24	0	20	31	153	267
South Dakota, total	0	0	0	15	10	5	4	2	57	81
South Dakota Sch of Mines & Tech	0	0	0	0	0	0	0	0	0	1
South Dakota State University	0	0	0	12	7	5	0	2	1	17
University of South Dakota	0	0	0	3	3	0	4	0	56	63
Tennessee, total	5	13	7	91	87	4	58	52	329	679
East Tennessee State University	0	0	0	0	0	0	0	0	19	19
Geo Peabody Col Teachers	0	0	0	0	0	0	0	0	40	40
Meharry Medical College	0	0	0	7	7	0	0	0	0	7
Mid-America Baptist Theol Sem	0	0	0	0	0	0	0	0	3	3
Middle Tennessee State U	0	0	0	0	0	0	0	5	8	14
Tennessee State University	0	0	0	0	0	0	0	1	32	33
Tennessee Technological U	0	0	0	0	0	0	0	0	0	9
University of Memphis	2	5	0	4	4	0	19	3	68	113
University Tennessee Knoxville	3	4	3	30	26	4	27	28	110	273
University Tennessee Memphis	0	0	0	22	22	0	0	0	1	23
Vanderbilt University	0	4	4	28	28	0	12	15	48	145
Texas, total	69	54	56	414	356	58	211	192	999	2,709
Baylor College of Medicine	0	0	0	31	31	0	0	0	1	32
Baylor University	1	3	0	2	2	0	0	0	32	40
Dallas Theological Seminary	0	0	0	0	0	0	0	0	4	4
Lamar University-Beaumont	0	0	0	0	0	0	0	0	0	3
Rice University	8	12	2	13	13	0	7	8	14	117
Sam Houston State University	0	0	0	0	0	0	0	6	0	6
Southern Methodist University	0	3	2	5	5	0	6	12	1	55
Southwestern Baptist Theol Sem	0	0	0	0	0	0	1	0	59	60
St Mary's University	0	0	0	0	0	0	3	0	1	4
Stephen F Austin State U	0	0	0	2	0	2	0	0	0	2
Texas A&M University	29	7	15	122	70	52	35	50	112	569
Texas A&M University-Commerce	0	0	0	0	0	0	1	0	53	54
Texas A&M University Kingsville	0	0	0	0	0	0	0	0	6	6
Texas Christian University	0	0	0	0	0	0	7	0	10	22
Texas Southern University	0	0	0	0	0	0	0	0	19	19
Texas Tech University	3	2	2	18	14	4	23	6	55	149
Texas Woman's University	0	0	0	3	3	0	24	2	52	81
University of Dallas	0	0	0	0	0	0	1	4	0	5
University of Houston	1	4	1	8	8	0	26	13	102	203
U North TX	0	5	12	7	7	0	29	11	112	183
U North TX Hlth Sci Ctr Ft Worth	0	0	0	6	6	0	0	0	0	6
U Texas at Arlington	0	4	4	4	4	0	2	3	21	86
U Texas at Austin	16	13	16	55	55	0	27	66	296	744
U Texas at Dallas	9	1	2	1	1	0	5	10	14	61
U Texas at El Paso	2	0	0	0	0	0	0	0	0	2
U Texas Hlth Sci Ctr Houston	0	0	0	66	66	0	0	1	32	99
U Texas Hlth Sci Ctr San Antonio	0	0	0	14	14	0	0	0	1	18
U Texas Med Branch Galveston	0	0	0	25	25	0	0	0	2	27
U Texas SW Med Ctr Dallas	0	0	0	32	32	0	14	0	0	52

See explanatory information, if any, and SOURCE at end of table.

Table 6. Institutions conferring science and engineering (S&E) doctorates, by State, institution, and major field: 1996

[To increase readability, fields span 2 pages and institutions are repeated on facing pages]

State and institution	S&E rank	Total S&E	Engineering						Physical sciences			
			Total	Chemical	Civil	Electrical	Mechanical	Other engineering	Total	Physics & astronomy	Chemistry	Other physical sciences
Utah, total	27	300	74	10	10	10	16	28	57	15	42	0
Brigham Young University	98	59	8	1	1	3	3	0	14	5	9	0
University of Utah	43	180	50	9	3	4	13	21	41	9	32	0
Utah State University	97	61	16	0	6	3	0	7	2	1	1	0
Vermont, total	45	47	6	0	1	2	2	1	4	0	4	0
Middlebury College	155	0	0	0	0	0	0	0	0	0	0	0
University of Vermont	110	47	6	0	1	2	2	1	4	0	4	0
Virginia, total	14	634	160	9	23	27	38	63	88	38	50	0
College of William and Mary	138	17	0	0	0	0	0	0	9	5	4	0
George Mason University	96	62	3	0	0	2	0	1	0	0	0	0
Old Dominion University	107	50	16	0	2	1	8	5	8	8	0	0
Presbyterian Schl Christ Educ	155	0	0	0	0	0	0	0	0	0	0	0
Regent University	155	0	0	0	0	0	0	0	0	0	0	0
Union Theological Sem Virginia	155	0	0	0	0	0	0	0	0	0	0	0
University of Virginia	40	190	45	6	1	8	10	20	35	21	14	0
Virginia Commonwealth University	95	63	0	0	0	0	0	0	15	2	13	0
Virginia Polytechnic Inst & St U	27	252	96	3	20	16	20	37	21	2	19	0
Washington, total	21	454	106	10	9	41	17	29	59	32	27	0
Gonzaga University	155	0	0	0	0	0	0	0	0	0	0	0
Seattle Pacific University	155	0	0	0	0	0	0	0	0	0	0	0
Seattle University	155	0	0	0	0	0	0	0	0	0	0	0
University of Washington Seattle	15	339	90	10	9	36	14	21	47	25	22	0
Washington State University	67	115	16	0	0	5	3	8	12	7	5	0
West Virginia, total	39	66	19	3	5	1	4	6	6	0	6	0
Marshall University	152	3	0	0	0	0	0	0	0	0	0	0
West Virginia University	95	63	19	3	5	1	4	6	6	0	6	0
Wisconsin, total	16	577	127	20	10	27	19	51	87	43	44	0
Marquette University	135	20	11	0	1	2	1	7	3	0	3	0
Medical College of Wisconsin	139	16	0	0	0	0	0	0	0	0	0	0
U of Wisconsin-Madison	3	498	112	20	8	25	18	41	71	37	34	0
U of Wisconsin-Milwaukee	114	43	4	0	1	0	0	3	13	6	7	0
Wyoming, total	43	53	9	5	3	1	0	0	8	1	7	0
University of Wyoming	104	53	9	5	3	1	0	0	8	1	7	0
Puerto Rico, total	47	33	1	0	1	0	0	0	3	2	1	0
Caribbean Ctr Advanced Studies	138	17	0	0	0	0	0	0	0	0	0	0
Inter American U PR Metropolitan	155	0	0	0	0	0	0	0	0	0	0	0
University of PR Mayaguez Campus	151	4	1	0	1	0	0	0	0	0	0	0
University of PR Rio Piedras	143	12	0	0	0	0	0	0	3	2	1	0

See explanatory information, if any, and SOURCE at end of table.

Table 6. Institutions conferring science and engineering (S&E) doctorates, by State, institution, and major field: 1996

[To increase readability, fields span 2 pages and institutions are repeated on facing pages]

State and institution	Earth, atmos., & ocean sciences	Mathematics	Computer sciences	Biological & agricultural sciences			Psychology	Social sciences	Non-S&E total	Grand total, all fields
				Total	Biological	Agricultural				
Utah, total	7	12	11	64	53	11	52	23	101	401
Brigham Young University	0	0	4	5	5	0	25	3	25	84
University of Utah	7	9	7	37	37	0	13	16	61	241
Utah State University	0	3	0	22	11	11	14	4	15	76
Vermont, total	0	0	0	20	20	0	17	0	13	60
Middlebury College	0	0	0	0	0	0	0	0	4	4
University of Vermont	0	0	0	20	20	0	17	0	9	56
Virginia, total	24	25	32	120	89	31	99	86	373	1,007
College of William and Mary	4	1	0	0	0	0	0	3	32	49
George Mason University	2	0	16	4	4	0	20	17	23	85
Old Dominion University	5	4	3	6	6	0	2	6	13	63
Presbyterian Schl Christ Educ	0	0	0	0	0	0	0	0	2	2
Regent University	0	0	0	0	0	0	0	0	2	2
Union Theological Sem Virginia	0	0	0	0	0	0	0	0	10	10
University of Virginia	5	5	8	29	29	0	34	29	134	324
Virginia Commonwealth University	0	0	0	27	27	0	17	4	34	97
Virginia Polytechnic Inst & St U	8	15	5	54	23	31	26	27	123	375
Washington, total	26	19	13	124	89	35	34	73	237	691
Gonzaga University	0	0	0	0	0	0	0	0	17	17
Seattle Pacific University	0	0	0	0	0	0	0	0	6	6
Seattle University	0	0	0	0	0	0	0	0	23	23
University of Washington Seattle	23	14	13	88	68	20	21	43	156	495
Washington State University	3	5	0	36	21	15	13	30	35	150
West Virginia, total	0	3	0	20	19	1	9	9	53	119
Marshall University	0	0	0	3	3	0	0	0	0	3
West Virginia University	0	3	0	17	16	1	9	9	53	116
Wisconsin, total	11	21	23	171	141	30	44	93	332	909
Marquette University	0	0	0	2	2	0	3	1	35	55
Medical College of Wisconsin	0	0	0	16	16	0	0	0	0	16
U of Wisconsin-Madison	10	21	20	145	115	30	34	85	254	752
U of Wisconsin-Milwaukee	1	0	3	8	8	0	7	7	43	86
Wyoming, total	9	6	3	11	9	2	6	1	25	78
University of Wyoming	9	6	3	11	9	2	6	1	25	78
Puerto Rico, total	3	0	0	1	1	0	25	0	24	57
Caribbean Ctr Advanced Studies	0	0	0	0	0	0	17	0	1	18
Inter American U PR Metropolitan	0	0	0	0	0	0	0	0	9	9
University of PR Mayaguez Campus	3	0	0	0	0	0	0	0	0	4
University of PR Rio Piedras	0	0	0	1	1	0	8	0	14	26

KEY: - = Not applicable

SOURCE: National Science Foundation/SRS, Survey of Earned Doctorates

Table 7. Postgraduation plans of science and engineering (S&E) doctorate recipients, by citizenship status and major field: 1996

Field of study	Total	Definite plans								Location unknown
		Total with definite plans	In the United States					Abroad	
			Total in U.S.	Postdoc study	Academic employment	Industry employment	Other		
	All recipients								
Science and engineering, total	27,230	16,611	14,580	6,453	2,955	3,582	1,590	1,987	44
Engineering, total	6,305	3,642	3,145	720	343	1,766	316	487	10
Aeronautical/astronautical	287	169	149	40	12	61	36	20	0
Chemical	798	500	423	113	27	272	11	77	0
Civil	697	368	298	73	73	112	40	67	3
Electrical	1,740	1,075	964	137	94	650	83	110	1
Industrial	258	128	105	9	34	51	11	23	0
Materials/metallurgical	572	333	300	99	8	173	20	29	4
Mechanical	1,052	566	492	129	43	272	48	72	2
Other engineering	901	503	414	120	52	175	67	89	0
Sciences, total	20,925	12,969	11,435	5,733	2,612	1,816	1,274	1,500	34
Physical sciences, total	3,838	2,414	2,163	1,319	189	567	88	241	10
Astronomy	192	133	102	73	17	8	4	31	0
Chemistry	2,148	1,402	1,294	783	110	359	42	101	7
Physics	1,485	870	759	456	62	200	41	108	3
Other physical sciences	13	9	8	7	0	0	1	1	0
Earth, atmospheric, and ocean sciences	794	463	396	200	70	76	50	65	2
Mathematics	1,122	642	543	170	241	113	19	92	7
Computer sciences	921	597	522	93	134	259	36	74	1
Biological sciences	5,723	3,885	3,566	2,913	318	181	154	311	8
Agricultural sciences	1,037	572	414	164	84	102	64	157	1
Psychology	3,491	2,129	2,063	681	504	330	548	64	2
Social sciences	3,999	2,267	1,768	193	1,072	188	315	496	3
Non-S&E, total	15,185	9,416	8,569	450	4,978	604	2,537	829	18
Grand total, all fields	42,415	26,027	23,149	6,903	7,933	4,186	4,127	2,816	62
	U.S. citizens								
Science and engineering, total	15,621	10,444	10,043	4,028	2,471	2,118	1,426	386	15
Engineering, total	2,591	1,756	1,704	303	272	851	278	51	1
Aeronautical/astronautical	166	120	118	24	12	46	36	2	0
Chemical	318	225	212	47	19	137	9	13	0
Civil	212	147	143	18	59	39	27	4	0
Electrical	705	495	485	53	76	279	77	10	0
Industrial	107	69	68	3	30	25	10	1	0
Materials/metallurgical	244	165	158	38	7	93	20	6	1
Mechanical	436	275	266	52	33	137	44	9	0
Other engineering	403	260	254	68	36	95	55	6	0
Sciences, total	13,030	8,688	8,339	3,725	2,199	1,267	1,148	335	14
Physical sciences, total	2,075	1,443	1,354	743	165	368	78	85	4
Astronomy	137	100	84	56	17	7	4	16	0
Chemistry	1,168	850	810	439	95	240	36	38	2
Physics	761	487	455	244	53	121	37	30	2
Other physical sciences	9	6	5	4	0	0	1	1	0
Earth, atmospheric, and ocean sciences	462	300	288	126	62	54	46	11	1
Mathematics	488	327	310	74	167	53	16	14	3
Computer sciences	421	298	290	51	93	116	30	8	0
Biological sciences	3,547	2,560	2,440	1,889	268	150	133	117	3
Agricultural sciences	473	289	284	77	75	73	59	5	0
Psychology	3,122	1,976	1,959	627	484	318	530	16	1
Social sciences	2,442	1,495	1,414	138	885	135	256	79	2
Non-S&E, total	12,120	7,977	7,794	326	4,471	535	2,462	170	13
Grand total, all fields	27,741	18,421	17,837	4,354	6,942	2,653	3,888	556	28

See explanatory information, if any, and SOURCE at end of table.

Table 7. Postgraduation plans of science and engineering (S&E) doctorate recipients, by citizenship status and major field: 1996

Field of study	Total	Definite plans								
		Total with definite plans	In the United States					Abroad	Location unknown
			Total in U.S.	Postdoc study	Academic employment	Industry employment	Other		
	Non-U.S. citizens with permanent visas								
Science and engineering, total	3,007	1,705	1,583	773	178	547	85	113	9
Engineering, total	792	446	417	81	24	293	19	25	4
Aeronautical/astronautical	18	7	7	3	0	4	0	0	0
Chemical	74	49	44	7	3	34	0	5	0
Civil	93	50	44	8	3	26	7	4	2
Electrical	221	133	121	8	5	109	5	6	0
Industrial	29	10	9	1	2	5	1	1	0
Materials/metallurgical	92	52	49	18	0	31	0	2	1
Mechanical	152	85	79	22	3	52	2	5	1
Other engineering	113	60	58	14	8	32	4	2	0
Sciences, total	2,215	1,259	1,166	692	154	254	66	88	5
Physical sciences, total	493	264	253	134	5	107	7	10	1
Astronomy	12	7	4	3	0	1	0	3	0
Chemistry	293	157	154	84	3	63	4	2	1
Physics	187	100	95	47	2	43	3	5	0
Other physical sciences	1	0	0	0	0	0	0	0	0
Earth, atmospheric, and ocean sciences	96	50	45	29	1	13	2	4	1
Mathematics	158	74	68	20	21	25	2	6	0
Computer sciences	92	68	66	5	12	46	3	2	0
Biological sciences	818	536	514	449	28	20	17	19	3
Agricultural sciences	103	39	32	15	3	11	3	7	0
Psychology	104	55	51	24	11	5	11	4	0
Social sciences	351	173	137	16	73	27	21	36	0
Non-S&E, total	758	415	359	37	254	24	44	55	1
Grand total, all fields	3,765	2,120	1,942	810	432	571	129	168	10
	Non-U.S. citizens with temporary visas								
Science and engineering, total	7,802	4,441	2,943	1,646	306	914	77	1,479	19
Engineering, total	2,716	1,435	1,022	336	47	621	18	408	5
Aeronautical/astronautical	93	42	24	13	0	11	0	18	0
Chemical	399	226	167	59	5	101	2	59	0
Civil	369	171	111	47	11	47	6	59	1
Electrical	749	447	352	76	13	262	1	94	1
Industrial	116	49	28	5	2	21	0	21	0
Materials/metallurgical	220	116	93	43	1	49	0	21	2
Mechanical	430	202	146	55	7	82	2	55	1
Other engineering	340	182	101	38	8	48	7	81	0
Sciences, total	5,086	3,006	1,921	1,310	259	293	59	1,071	14
Physical sciences, total	1,139	704	554	441	19	91	3	145	5
Astronomy	42	26	14	14	0	0	0	12	0
Chemistry	613	393	328	259	12	55	2	61	4
Physics	481	282	209	165	7	36	1	72	1
Other physical sciences	3	3	3	3	0	0	0	0	0
Earth, atmospheric, and ocean sciences	205	112	63	45	7	9	2	49	0
Mathematics	441	240	164	75	53	35	1	72	4
Computer sciences	376	228	164	35	29	97	3	63	1
Biological sciences	1,240	787	611	574	22	11	4	174	2
Agricultural sciences	442	243	98	72	6	18	2	144	1
Psychology	181	96	51	29	9	7	6	44	1
Social sciences	1,062	596	216	39	114	25	38	380	0
Non-S&E, total	1,808	1,011	408	87	248	44	29	599	4
Grand total, all fields	9,610	5,452	3,351	1,733	554	958	106	2,078	23

SOURCE: National Science Foundation/SRS, Survey of Earned Doctorates

Table 8. Percentage distribution of definite postgraduation plans of science and engineering (S&E) doctorate recipients, by citizenship status and major field: 1996

Field of study	Definite plans	In the United States					Abroad	Location unknown
		Total in U.S.	Postdoc study	Academic employment	Industry employment	Other		
	All recipients							
Science and engineering, total	100.0	87.8	38.8	17.8	21.6	9.6	12.0	0.3
Engineering, total	100.0	86.4	19.8	9.4	48.5	8.7	13.4	.3
Aeronautical/astronautical	100.0	88.2	23.7	7.1	36.1	21.3	11.8	0
Chemical	100.0	84.6	22.6	5.4	54.4	2.2	15.4	0
Civil	100.0	81.0	19.8	19.8	30.4	10.9	18.2	.8
Electrical	100.0	89.7	12.7	8.7	60.5	7.7	10.2	1
Industrial	100.0	82.0	7.0	26.6	39.8	8.6	18.0	0
Materials/metallurgical	100.0	90.1	29.7	2.4	52.0	6.0	8.7	1.2
Mechanical	100.0	86.9	22.8	7.6	48.1	8.5	12.7	4
Other engineering	100.0	82.3	23.9	10.3	34.8	13.3	17.7	0
Sciences, total	100.0	88.2	44.2	20.1	14.0	9.8	11.6	.3
Physical sciences, total	100.0	89.6	54.6	7.8	23.5	3.6	10.0	.4
Astronomy	100.0	76.7	54.9	12.8	6.0	3.0	23.3	0
Chemistry	100.0	92.3	55.8	7.8	25.6	3.0	7.2	.5
Physics	100.0	87.2	52.4	7.1	23.0	4.7	12.4	.3
Other physical sciences	100.0	88.9	77.8	0	0	11.1	11.1	0
Earth, atmospheric, and ocean sciences	100.0	85.5	43.2	15.1	16.4	10.8	14.0	.4
Mathematics	100.0	84.6	26.5	37.5	17.6	3.0	14.3	1.1
Computer sciences	100.0	87.4	15.6	22.4	43.4	6.0	12.4	.2
Biological sciences	100.0	91.8	75.0	8.2	4.7	4.0	8.0	.2
Agricultural sciences	100.0	72.4	28.7	14.7	17.8	11.2	27.4	.2
Psychology	100.0	96.9	32.0	23.7	15.5	25.7	3.0	.1
Social sciences	100.0	78.0	8.5	47.3	8.3	13.9	21.9	.1
Non-S&E, total	100.0	91.0	4.8	52.9	6.4	26.9	8.8	.2
Grand total, all fields	100.0	88.9	26.5	30.5	16.1	15.9	10.8	.2
	U.S. citizens							
Science and engineering, total	100.0	96.2	38.6	23.7	20.3	13.7	3.7	0.1
Engineering, total	100.0	97.0	17.3	15.5	48.5	15.8	2.9	.1
Aeronautical/astronautical	100.0	98.3	20.0	10.0	38.3	30.0	1.7	0
Chemical	100.0	94.2	20.9	8.4	60.9	4.0	5.8	0
Civil	100.0	97.3	12.2	40.1	20.5	18.4	2.7	0
Electrical	100.0	98.0	10.7	15.4	56.4	15.6	2.0	0
Industrial	100.0	98.6	4.3	43.5	36.2	14.5	1.4	0
Materials/metallurgical	100.0	95.8	23.0	4.2	56.4	12.1	3.6	.6
Mechanical	100.0	96.7	18.9	12.0	49.8	16.0	3.3	0
Other engineering	100.0	97.7	26.2	13.8	36.5	21.2	2.3	0
Sciences, total	100.0	96.0	42.9	25.3	14.6	13.2	3.9	.2
Physical sciences, total	100.0	93.8	51.5	11.4	25.5	5.4	5.9	.3
Astronomy	100.0	84.0	56.0	17.0	7.0	4.0	16.0	0
Chemistry	100.0	95.3	51.6	11.2	28.2	4.2	4.5	.2
Physics	100.0	93.4	50.1	10.9	24.8	7.6	6.2	.4
Other physical sciences	100.0	83.3	66.7	0	0	16.7	16.7	0
Earth, atmospheric, and ocean sciences	100.0	96.0	42.0	20.7	18.0	15.3	3.7	.3
Mathematics	100.0	94.8	22.6	51.1	16.2	4.9	4.3	.9
Computer sciences	100.0	97.3	17.1	31.2	38.9	10.1	2.7	0
Biological sciences	100.0	95.3	73.8	10.5	5.9	5.2	4.6	.1
Agricultural sciences	100.0	98.3	26.6	26.0	25.3	20.4	1.7	0
Psychology	100.0	99.1	31.7	24.5	16.1	26.8	.8	.1
Social sciences	100.0	94.6	9.2	59.2	9.0	17.1	5.3	.1
Non-S&E, total	100.0	97.7	4.1	56.0	6.7	30.9	2.1	.2
Grand total, all fields	100.0	96.8	23.6	37.7	14.4	21.1	3.0	.2

See explanatory information, if any, and SOURCE at end of table.

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Table 8. Percentage distribution of definite postgraduation plans of science and engineering (S&E) doctorate recipients, by citizenship status and major field: 1996

Field of study	Definite plans	In the United States					Abroad	Location unknown
		Total in U.S.	Postdoc study	Academic employment	Industry employment	Other		
	Non-U.S. citizens with permanent visas							
Science and engineering, total	100.0	92.8	45.3	10.4	32.1	5.0	6.6	0.5
Engineering, total	100.0	93.5	18.2	5.4	65.7	4.3	5.6	.9
Aeronautical/astronautical	100.0	100.0	42.9	0	57.1	0	0	0
Chemical	100.0	89.8	14.3	6.1	69.4	0	10.2	0
Civil	100.0	88.0	16.0	6.0	52.0	14.0	8.0	4.0
Electrical	100.0	95.5	6.0	3.8	82.0	3.8	4.5	0
Industrial	100.0	90.0	10.0	20.0	50.0	10.0	10.0	0
Materials/metallurgical	100.0	94.2	34.6	0	59.6	0	3.8	1.9
Mechanical	100.0	92.9	25.9	3.5	61.2	2.4	5.9	1.2
Other engineering	100.0	96.7	23.3	13.3	53.3	6.7	3.3	0
Sciences, total	100.0	92.6	55.0	12.2	20.2	5.2	7.0	.4
Physical sciences, total	100.0	95.8	50.8	1.9	40.5	2.7	3.8	.4
Astronomy	100.0	57.1	42.9	0	14.3	0	42.9	0
Chemistry	100.0	98.1	53.5	1.9	40.1	2.5	1.3	.6
Physics	100.0	95.0	47.0	2.0	43.0	3.0	5.0	0
Other physical sciences	0	0	0	0	0	0	0	0
Earth, atmospheric, and ocean sciences	100.0	90.0	58.0	2.0	26.0	4.0	8.0	2.0
Mathematics	100.0	91.9	27.0	28.4	33.8	2.7	8.1	0
Computer sciences	100.0	97.1	7.4	17.6	67.6	4.4	2.9	0
Biological sciences	100.0	95.9	83.8	5.2	3.7	3.2	3.5	.6
Agricultural sciences	100.0	82.1	38.5	7.7	28.2	7.7	17.9	0
Psychology	100.0	92.7	43.6	20.0	9.1	20.0	7.3	0
Social sciences	100.0	79.2	9.2	42.2	15.6	12.1	20.8	0
Non-S&E, total	100.0	86.5	8.9	61.2	5.8	10.6	13.3	.2
Grand total, all fields	100.0	91.6	38.2	20.4	26.9	6.1	7.9	.5
	Non-U.S. citizens with temporary visas							
Science and engineering, total	100.0	66.3	37.1	6.9	20.6	1.7	33.3	0.4
Engineering, total	100.0	71.2	23.4	3.3	43.3	1.3	28.4	.3
Aeronautical/astronautical	100.0	57.1	31.0	0	26.2	0	42.9	0
Chemical	100.0	73.9	26.1	2.2	44.7	.9	26.1	0
Civil	100.0	64.9	27.5	6.4	27.5	3.5	34.5	.6
Electrical	100.0	78.7	17.0	2.9	58.6	.2	21.0	.2
Industrial	100.0	57.1	10.2	4.1	42.9	0	42.9	0
Materials/metallurgical	100.0	80.2	37.1	.9	42.2	0	18.1	1.7
Mechanical	100.0	72.3	27.2	3.5	40.6	1.0	27.2	.5
Other engineering	100.0	55.5	20.9	4.4	26.4	3.8	44.5	0
Sciences, total	100.0	63.9	43.6	8.6	3.7	2.0	35.6	.5
Physical sciences, total	100.0	78.7	62.6	2.7	12.9	.4	20.6	.7
Astronomy	100.0	53.8	53.8	0	0	0	46.2	0
Chemistry	100.0	83.5	65.9	3.1	14.0	.5	15.5	1.0
Physics	100.0	74.1	58.5	2.5	12.8	.4	25.5	.4
Other physical sciences	100.0	100.0	100.0	0	0	0	0	0
Earth, atmospheric, and ocean sciences	100.0	56.3	40.2	6.3	8.0	1.8	43.8	0
Mathematics	100.0	68.3	31.3	22.1	14.6	.4	30.0	1.7
Computer sciences	100.0	71.9	15.4	12.7	42.5	1.3	27.6	.4
Biological sciences	100.0	77.6	72.9	2.8	1.4	.5	22.1	.3
Agricultural sciences	100.0	40.3	29.6	2.5	7.4	.8	59.3	.4
Psychology	100.0	53.1	30.2	9.4	7.3	6.3	45.8	1.0
Social sciences	100.0	36.2	6.5	19.1	4.2	6.4	63.8	0
Non-S&E, total	100.0	40.4	8.6	24.5	4.4	2.9	59.2	.4
Grand total, all fields	100.0	61.5	31.8	10.2	17.6	1.9	38.1	.4

SOURCE: National Science Foundation/SRS, Survey of Earned Doctorates

Table 9. Postgraduation plans of science and engineering (S&E) doctorate recipients, by sex and major field: 1996

[U.S. citizens and non-U.S. citizens with permanent visas]

Field of study	Total	Definite plans								
		Total with definite plans	In the United States					Abroad	Location unknown
			Total in U.S.	Postdoc study	Academic employment	Industry employment	Other		
	All such recipients								
Science and engineering, total	18,628	12,149	11,626	4,801	2,649	2,665	1,511	499	24
Engineering, total	3,383	2,202	2,121	384	296	1,144	297	76	5
Aeronautical/astronautical	184	127	125	27	12	50	36	2	0
Chemical	392	274	256	54	22	171	9	18	0
Civil	305	197	187	26	62	65	34	8	2
Electrical	926	628	612	61	81	388	82	16	0
Industrial	136	79	77	4	32	30	11	2	0
Materials/metallurgical	336	217	207	56	7	124	20	8	2
Mechanical	588	360	345	74	36	189	46	14	1
Other engineering	516	320	312	82	44	127	59	8	0
Sciences, total	15,245	9,947	9,505	4,417	2,353	1,521	1,214	423	19
Physical sciences, total	2,568	1,707	1,607	877	170	475	85	95	5
Astronomy	149	107	88	59	17	8	4	19	0
Chemistry	1,461	1,007	964	523	98	303	40	40	3
Physics	948	587	550	291	55	164	40	35	2
Other physical sciences	10	6	5	4	0	0	1	1	0
Earth, atmospheric, and ocean sciences	558	350	333	155	63	67	48	15	2
Mathematics	646	401	378	94	188	78	18	20	3
Computer sciences	513	366	356	56	105	162	33	10	0
Biological sciences	4,365	3,096	2,954	2,338	296	170	150	136	6
Agricultural sciences	576	328	316	92	78	84	62	12	0
Psychology	3,226	2,031	2,010	651	495	323	541	20	1
Social sciences	2,793	1,668	1,551	154	958	162	277	115	2
Non-S&E, total	12,878	8,392	8,153	363	4,725	559	2,506	225	14
Grand total, all fields	31,506	20,541	19,779	5,164	7,374	3,224	4,017	724	38
	Women								
Science and engineering, total	6,960	4,464	4,311	1,872	1,144	677	618	147	6
Engineering, total	523	331	321	70	65	151	35	9	1
Aeronautical/astronautical	18	11	11	1	5	1	4	0	0
Chemical	98	68	66	14	8	44	0	2	0
Civil	47	31	29	6	11	8	4	1	1
Electrical	105	67	66	10	11	37	8	1	0
Industrial	36	26	26	1	16	8	1	0	0
Materials/metallurgical	63	32	30	10	2	16	2	2	0
Mechanical	60	37	35	8	6	16	5	2	0
Other engineering	96	59	58	20	6	21	11	1	0
Sciences, total	6,437	4,133	3,990	1,802	1,079	526	583	138	5
Physical sciences, total	610	407	385	175	61	131	18	22	0
Astronomy	35	31	21	13	5	2	1	10	0
Chemistry	439	290	282	124	42	103	13	8	0
Physics	134	85	81	37	14	26	4	4	0
Other physical sciences	2	1	1	1	0	0	0	0	0
Earth, atmospheric, and ocean sciences	130	78	75	39	15	11	10	3	0
Mathematics	145	97	95	30	46	17	2	2	0
Computer sciences	91	62	60	6	27	24	3	2	0
Biological sciences	1,941	1,339	1,278	1,020	137	58	63	59	2
Agricultural sciences	175	101	96	35	21	21	19	5	0
Psychology	2,183	1,364	1,349	437	332	211	369	14	1
Social sciences	1,162	685	652	60	440	53	99	31	2
Non-S&E, total	7,363	4,760	4,664	208	2,697	289	1,470	90	6
Grand total, all fields	14,323	9,224	8,975	2,080	3,841	966	2,088	237	12

See explanatory information, if any, and SOURCE at end of table.

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Table 9. Postgraduation plans of science and engineering (S&E) doctorate recipients, by sex and major field: 1996

[U.S. citizens and non-U.S. citizens with permanent visas]

Field of study	Total	Definite plans								
		Total with definite plans	In the United States					Abroad	Location unknown
			Total in U.S.	Postdoc study	Academic employment	Industry employment	Other		
	Men								
Science and engineering, total	11,668	7,685	7,315	2,929	1,505	1,988	893	352	18
Engineering, total	2,860	1,871	1,800	314	231	993	262	67	4
Aeronautical/astronautical	166	116	114	26	7	49	32	2	0
Chemical	294	206	190	40	14	127	9	16	0
Civil	258	166	158	20	51	57	30	7	1
Electrical	821	561	546	51	70	351	74	15	0
Industrial	100	53	51	3	16	22	10	2	0
Materials/metallurgical	273	185	177	46	5	108	18	6	2
Mechanical	528	323	310	66	30	173	41	12	1
Other engineering	420	261	254	62	38	106	48	7	0
Sciences, total	8,808	5,814	5,515	2,615	1,274	995	631	285	14
Physical sciences, total	1,958	1,300	1,222	702	109	344	67	73	5
Astronomy	114	76	67	46	12	6	3	9	0
Chemistry	1,022	717	682	399	56	200	27	32	3
Physics	814	502	469	254	41	138	36	31	2
Other physical sciences	8	5	4	3	0	0	1	1	0
Earth, atmospheric and ocean sciences	428	272	258	116	48	56	38	12	2
Mathematics	501	304	283	64	142	61	16	18	3
Computer sciences	422	304	296	50	78	138	30	8	0
Biological sciences	2,424	1,757	1,676	1,318	159	112	87	77	4
Agricultural sciences	401	227	220	57	57	63	43	7	0
Psychology	1,043	667	661	214	163	112	172	6	0
Social sciences	1,631	983	899	94	518	109	178	84	0
Non-S&E, total	5,515	3,632	3,489	155	2,028	270	1,036	135	8
Grand total, all fields	17,183	11,317	10,804	3,084	3,533	2,258	1,929	487	26

SOURCE: National Science Foundation/SRS, Survey of Earned Doctorates

Table 10. Percentage distribution of definite postgraduation plans of science and engineering (S&E) doctorate recipients, by sex and major field: 1996

[U.S. citizens and non-U.S. citizens with permanent visas]

Field of study	Definite plans	In the United States					Abroad	Location unknown
		Total in U.S.	Postdoc study	Academic employment	Industry employment	Other		
	All such recipients							
Science and engineering, total	100.0	95.7	39.5	21.8	21.9	12.4	4.1	0.2
Engineering, total	100.0	96.3	17.4	13.4	52.0	13.5	3.5	.2
Aeronautical/astronautical	100.0	98.4	21.3	9.4	39.4	28.3	1.6	0
Chemical	100.0	93.4	19.7	8.0	62.4	3.3	6.6	0
Civil	100.0	94.9	13.2	31.5	33.0	17.3	4.1	1.0
Electrical	100.0	97.5	9.7	12.9	61.8	13.1	2.5	0
Industrial	100.0	97.5	5.1	40.5	38.0	13.9	2.5	0
Materials/metallurgical	100.0	95.4	25.8	3.2	57.1	9.2	3.7	.9
Mechanical	100.0	95.8	20.6	10.0	52.5	12.8	3.9	.3
Other engineering	100.0	97.5	25.6	13.7	39.7	18.4	2.5	0
Sciences, total	100.0	95.6	44.4	23.7	15.3	12.2	4.3	.2
Physical sciences, total	100.0	94.1	51.4	10.0	27.8	5.0	5.6	.3
Astronomy	100.0	82.2	55.1	15.9	7.5	3.7	17.8	0
Chemistry	100.0	95.7	51.9	9.7	30.1	4.0	4.0	.3
Physics	100.0	93.7	49.6	9.4	27.9	6.8	6.0	.3
Other physical sciences	100.0	83.3	66.7	0	0	16.7	16.7	0
Earth, atmospheric, and ocean sciences	100.0	95.1	44.3	18.0	19.1	13.7	4.3	.6
Mathematics	100.0	94.3	23.4	46.9	19.5	4.5	5.0	.7
Computer sciences	100.0	97.3	15.3	28.7	44.3	9.0	2.7	0
Biological sciences	100.0	95.4	75.5	9.6	5.5	4.8	4.4	.2
Agricultural sciences	100.0	96.3	28.0	23.8	25.6	18.9	3.7	0
Psychology	100.0	99.0	32.1	24.4	15.9	26.6	1.0	.0
Social sciences	100.0	93.0	9.2	57.4	9.7	16.6	6.9	.1
Non-S&E, total	100.0	97.2	4.3	56.3	6.7	29.9	2.7	.2
Grand total, all fields	100.0	96.3	25.1	35.9	15.7	19.6	3.5	.2
	Women							
Science and engineering, total	100.0	96.6	41.9	25.6	15.2	13.8	3.3	0.1
Engineering, total	100.0	97.0	21.1	19.6	45.6	10.6	2.7	.3
Aeronautical/astronautical	100.0	100.0	9.1	45.5	9.1	36.4	0	0
Chemical	100.0	97.1	20.6	11.8	64.7	0	2.9	0
Civil	100.0	93.5	19.4	35.5	25.8	12.9	3.2	3.2
Electrical	100.0	98.5	14.9	16.4	55.2	11.9	1.5	0
Industrial	100.0	100.0	3.8	61.5	30.8	3.8	0	0
Materials/metallurgical	100.0	93.8	31.3	6.3	50.0	6.3	6.3	0
Mechanical	100.0	94.6	21.6	16.2	43.2	13.5	5.4	0
Other engineering	100.0	98.3	33.9	10.2	35.6	18.6	1.7	0
Sciences, total	100.0	96.5	43.6	26.1	12.7	14.1	3.3	.1
Physical sciences, total	100.0	94.6	43.0	15.0	32.2	4.4	5.4	0
Astronomy	100.0	67.7	41.9	16.1	6.5	3.2	32.3	0
Chemistry	100.0	97.2	42.8	14.5	35.5	4.5	2.8	0
Physics	100.0	95.3	43.5	16.5	30.6	4.7	4.7	0
Other physical sciences	100.0	100.0	100.0	0	0	0	0	0
Earth, atmospheric, and ocean sciences	100.0	96.2	50.0	19.2	14.1	12.8	3.8	0
Mathematics	100.0	97.9	30.9	47.4	17.5	2.1	2.1	0
Computer sciences	100.0	96.8	9.7	43.5	38.7	4.8	3.2	0
Biological sciences	100.0	95.4	76.2	10.2	4.3	4.7	4.4	.1
Agricultural sciences	100.0	95.0	34.7	20.8	20.8	18.8	5.0	0
Psychology	100.0	98.9	32.0	24.3	15.5	27.1	1.0	.1
Social sciences	100.0	95.2	8.8	64.2	7.7	14.5	4.5	.3
Non-S&E, total	100.0	98.0	4.4	56.7	6.1	30.9	1.9	.1
Grand total, all fields	100.0	97.3	22.5	41.6	10.5	22.6	2.6	.1

See explanatory information, if any, and SOURCE at end of table.

Table 10. Percentage distribution of definite postgraduation plans of science and engineering (S&E) doctorate recipients, by sex and major field: 1996

[U.S. citizens and non-U.S. citizens with permanent visas]

Field of study	Definite plans	In the United States					Abroad	Location unknown
		Total in U.S.	Postdoc study	Academic employment	Industry employment	Other		
	Men							
Science and engineering, total	100.0	95.2	38.1	19.6	25.9	11.6	4.6	0.2
Engineering, total	100.0	96.2	16.8	12.3	53.1	14.0	3.6	.2
Aeronautical/astronautical	100.0	98.3	22.4	6.0	42.2	27.6	1.7	0
Chemical	100.0	92.2	19.4	6.8	61.7	4.4	7.8	0
Civil	100.0	95.2	12.0	30.7	34.3	18.1	4.2	.6
Electrical	100.0	97.3	9.1	12.5	62.6	13.2	2.7	0
Industrial	100.0	96.2	5.7	30.2	41.5	18.9	3.8	0
Materials/metallurgical	100.0	95.7	24.9	2.7	58.4	9.7	3.2	1.1
Mechanical	100.0	96.0	20.4	9.3	53.6	12.7	3.7	.3
Other engineering	100.0	97.3	23.8	14.6	40.6	18.4	2.7	0
Sciences, total	100.0	94.9	45.0	21.9	17.1	10.9	4.9	.2
Physical sciences, total	100.0	94.0	54.0	8.4	26.5	5.2	5.6	.4
Astronomy	100.0	88.2	60.5	15.8	7.9	3.9	11.8	0
Chemistry	100.0	95.1	55.6	7.8	27.9	3.8	4.5	.4
Physics	100.0	93.4	50.6	8.2	27.5	7.2	6.2	.4
Other physical sciences	100.0	80.0	60.0	0	0	20.0	20.0	0
Earth, atmospheric, and ocean sciences	100.0	94.9	42.6	17.6	20.6	14.0	4.4	.7
Mathematics	100.0	93.1	21.1	46.7	20.1	5.3	5.9	1.0
Computer sciences	100.0	97.4	16.4	25.7	45.4	9.9	2.6	0
Biological sciences	100.0	95.4	75.0	9.0	6.4	5.0	4.4	.2
Agricultural sciences	100.0	96.9	25.1	25.1	27.8	18.9	3.1	0
Psychology	100.0	99.1	32.1	24.4	16.8	25.8	.9	0
Social sciences	100.0	91.5	9.6	52.7	11.1	18.1	8.5	0
Non-S&E, total	100.0	96.1	4.3	55.8	7.4	28.5	3.7	.2
Grand total, all fields	100.0	95.5	27.3	31.2	20.0	17.0	4.3	.2

SOURCE: National Science Foundation/SRS, Survey of Earned Doctorates

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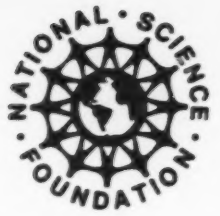

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